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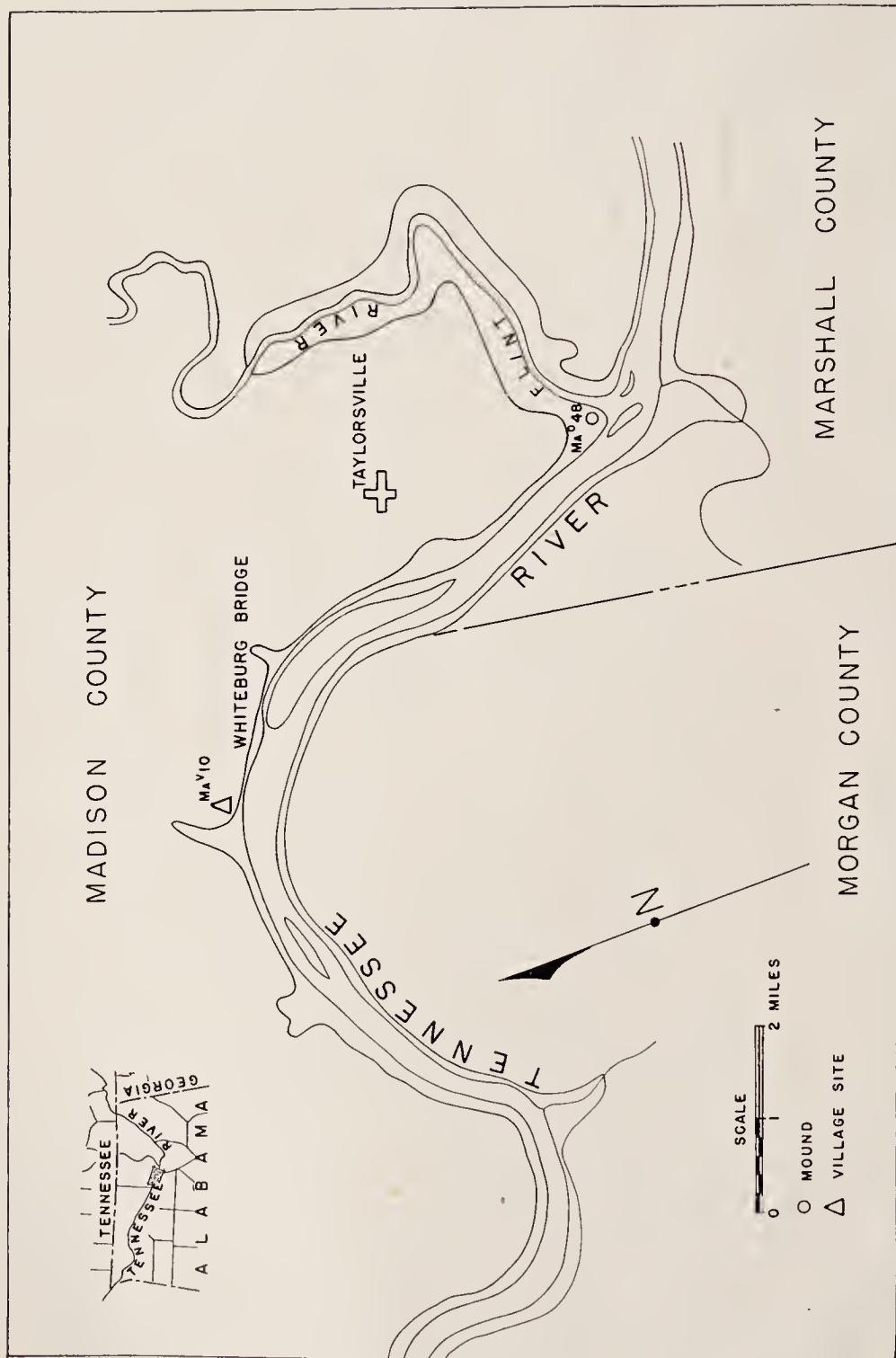
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Map of portion of the Tennessee River

GEOLOGICAL SURVEY OF ALABAMA

WALTER B. JONES, STATE GEOLOGIST

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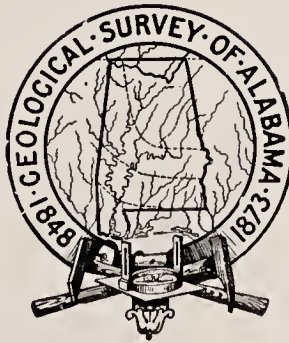
THE FLINT RIVER SITE, MA⁴⁸

By

Wm. S. WEBB

and

DAVID L. DeJARNETTE



Prepared with the Assistance of the Work Projects Administration
and with the Cooperation of the Tennessee Valley Authority

UNIVERSITY, ALABAMA

1948

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LETTER OF TRANSMITTAL

To His Excellency,
James E. Folsom
Governor of Alabama
Montgomery, Alabama

Sir:

I have the honor to transmit herewith the manuscript of a report on "The Flint River Site, Ma°48", by Wm. S. Webb and David L. DeJarnette. It is requested that this be printed as Museum Paper 23 of the Alabama Museum of Natural History.

Respectfully,

WALTER B. JONES,
State Geologist

University, Alabama
March, 1948

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THE FLINT RIVER SITE Ma°48

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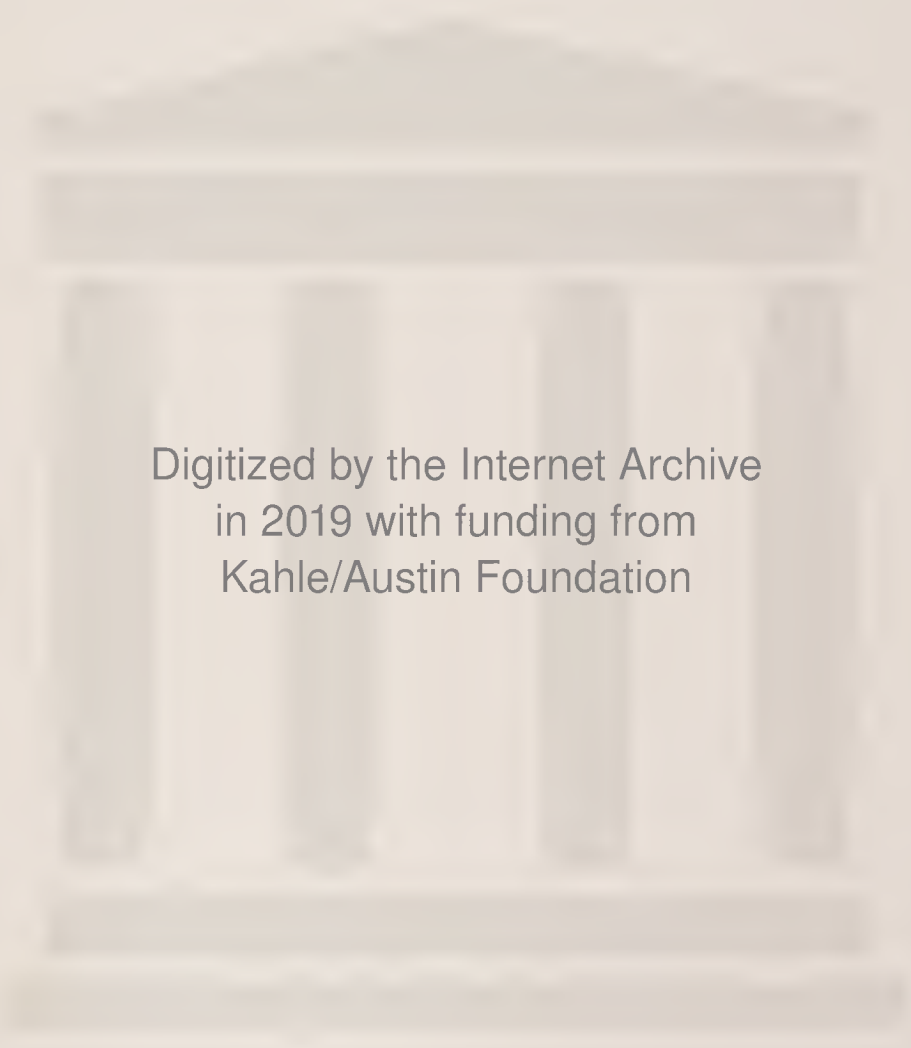
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FOREWORD

The Guntersville Dam, on the Tennessee River, about nine miles downstream from Guntersville, Marshall County, Alabama, was completed January 16, 1939 at which time the gates were closed and the Basin began to fill. Some eighteen months prior to flooding the basin, intensive archaeological investigation of key sites in the basin was conducted by the Tennessee Valley Authority in cooperation with the Alabama Museum of Natural History using W. P. A. labor for field work, and for establishing an archaeological laboratory at Birmingham, Alabama, where the material from the field could be cleaned, restored, and studied. While the investigations were in progress in Guntersville Basin it became apparent that W. P. A. labor was available in the region of the west of Guntersville Basin; and also that a number of important key sites marginal to Wheeler and Pickwick Basins, which it had been impossible to investigate during the short periods of the previous surveys in those basins, were being slowly destroyed by reason of the higher water table created by the filling of the basins. Because of this available labor at important sites which were being gradually destroyed by natural processes, work was undertaken at four sites outside Guntersville Basin, two in Pickwick Basin and two in Wheeler Basin. The Flint River Site, the subject of this report, is one of those in Wheeler Basin chosen for investigation. For exact location of this site, see the map (frontispiece) showing a portion of the Tennessee River near the mouth of the Flint River.

The authors wish to express their appreciation to Dr. Lawrence L. Durisch of the T. V. A. and to Dr. Walter B. Jones, Director of the Alabama Museum of Natural History, for the many services of cooperation which the institutions represented by them, rendered in this survey, which made this report possible.

In particular, they wish to express their thanks to Mr. H. Summerfield Day for his service as field party supervisor of the excavations. The material recovered from this site was sent to the Central Archaeological Laboratory at Birmingham for processing and study. The authors acknowledge with pleasure,

the many and varied services rendered by the Central Archaeological Laboratory under the general supervision of Mr. Harold F. Dahms, who by his scientific attitude, uniform courtesy and helpfulness, assisted in the solution of many problems.

Miss Marion L. Dunlevy, Laboratory Archaeologist at the Central Archaeological Laboratory, specialized in the study of ceramics from this area. The pottery study included in this report is the result of her painstaking study and supervision.

To Mr. James R. Foster, Junior Archaeologist, T. V. A., acknowledgment is made for his classification and study of the flint material of this region. The depth distribution of flint types at this site, published in tabular form herein, is the result of his careful analysis.

INTRODUCTION

SHELL MOUND STRATIGRAPHY AND CHRONOLOGY
ALONG THE TENNESSEE RIVER IN
NORTHERN ALABAMA

The Tennessee River in its sweep across the northern end of the state of Alabama in a general east to west direction, presents a double length of river bank for some 200 miles not counting the shore line of the numerous islands enclosed by it. Along this extended river bank are some 340 sites, large and small, commonly designated "shell mounds." The number of these shell mounds and the size of many individual mounds both in area and depth offer abundant evidence of a concentrated occupancy, long continued. Shell mounds along the course of this mighty river are by no means the only evidence of occupancy in the valley. Scores of other types of sites, some very large, are scattered throughout the valley, many having no apparent connection with the shell mound people. However, where such other types of sites do occur, associated in any way with middens left by the shellmound people, they invariably overlie the latter, that is, any stratified site evidence of occupancy by the shell mound people is always on the bottom. It is thus obvious that the shell mound occupancy is the earliest known in this area.

Extensive excavations in Wheeler, Pickwick, and Gunter-ville Basins, since 1934, have produced a wealth of information relative to the material culture and burial practices of these people, who, because of their dependance on the shellfish of the river for food, early began to create these large middens. As knowledge of the builders of these shell middens has increased, it has become clear that the material culture and habits of these peoples have not remained static; but that there has been a series of changes either the result of their own development, or in consequence of contact with other peoples. These changes are manifested in a variety of ways. The best objective evidence of such changes as revealed by excavations, in these sites, is the appearance in a particular stratum of a **new type** of artifact, previously not used, as shown by the entire absence of this artifact from lower and earlier strata in these middens.

While changes such as the introduction of a new type of artifact are easily demonstrated by a careful study of the depth distribution of artifacts, at a particular site, the significance of such observations is greatly enhanced when it becomes apparent by a comparison of various sites with each other that a very similar series of changes have taken place in many sites widely separated along the river. It has been demonstrated, by the stratigraphy revealed by excavation, that all shell mounds along the Tennessee River have had a very similar development. Not all of these sites are of the same age. Those which were begun later clearly showed that they lacked the characteristics of the lower levels of the earlier middens. Some sites after long occupancy were abandoned, usually for causes unknown. In some cases, however, abandonment was the result of a river flood, which deposited a layer of silt over the site, thus, sealing off its archaeological record as of the date of the flood. Such an abandoned site would show none of the later evidences of development found on other sites, unless it had, at some later time, been reoccupied. However, all of the strata laid down during the occupancy of any site can, in general, be distinguished and equated to corresponding strata in other sites which may have begun earlier or persisted longer. It is important thus to emphasize **that any objectively demonstrated stratigraphy, co-existing on many sites, must have relative chronological significance.**

In general, archaeologists look with grave suspicion upon any chronology based on typology of artifacts. This is quite correct as a scientific attitude of mind, since it must be obvious that the mere possession of a similar artifact by two different peoples does not in general prove their contemporaneity. However, in the case of these great shell middens along the Tennessee River, the people who were the builders of the shell mounds seem to have had a common origin as indicated by studies of their physical anthropology, that is, they were a homogeneous population. The river gave very easy communication between sites. This easy communication would seem to guarantee a rapid spread of cultural ideas, and material objects from site to site. This is especially significant since the occupants of these separate shell mounds were probably friends and kindred, **rather than people of different tribes and diverse cultural backgrounds.** Thus, if any site had developed a new technique, or

discovered a new source of valuable material such information would quickly be transmitted up and down the river and no site would long lag behind the other in its use of the new technique or be without the benefit of the new material. Here, on the Tennessee River, there would seem to have been an opportunity for a homogeneity in cultural pattern in many sites over a large area. As stated, this homogeneity, which seems demonstrated, is ascribed to a common origin for the people of all shell mound sites; a similarity of environmental factors; and the easy communication between distant sites, made possible by travel on the river. If such was the case, then indeed we may assume with some assurance of validity that likeness in behavior, or similarity of material things points to contemporary occupancy. It is on this basis that stratigraphy may be translated into a relative chronology.

In contemplating the development of culture at any site, if it be found that in any early level, a site did not manifest a trait, which did appear in its later occupancy; it is certain that there must have been a time of introduction, a time of first appearance of the new trait. If the first appearance of a trait can be objectively determined by stratigraphy, it would seem that such a fact could be used as a chronological marker. Once a technique is devised, a custom begun, or a type artifact is introduced, it may persist for a long time, or its use may grow rapidly to a maximum and decline, or be largely abandoned. The length of time it was used, or the time of its discontinuance cannot in general be determined, and such time interval cannot be used as a marker in chronology. Man generally does not forget what he has once known, or discovered. The long persistence of a trait, after its use has become almost negligible, is often seen among historic, as well as prehistoric peoples.

However, it is believed that the times of introduction of each of a series of artifacts, whose order of appearance can be determined stratigraphically, particularly if the order appears to be identical on many associated sites; can be effectively used as time markers in a relative chronological scale. Because of this belief it is propose to set up a six step chronological scale for the shell midden sites on the Tennessee River, each step being defined in its beginning by the appearance of a material trait. It is evident that each time zone extends from its begin-

ning to the beginning of the next succeeding zone. There is no attempt to define the zone in terms of typology of artifacts. There is no suggestion that any artifact is "diagnostic," but each zone except the first, large or small in time, begins with an objective determination of the first occurrence of a type of artifact, and ends only when the next later time zone begins.

Archaic (1)

It has been demonstrated in the Pickwick Basin, where the shell mound seems deepest that at the bottom of these deep deposits there are strata showing much evidence of occupancy, but these strata contain **no worked flint** of any kind. It is believed that the bottom layers of these sites present the oldest evidence of communal occupancy to be found in this region. It is proposed to designate this first period as Archaic (1) and to assign to it any site where the evidence of early occupancy does not include any worked flint. Archaic (1) time zone **begins** therefore, with the earliest evidence of occupancy and **ends** with the introduction of worked flint. Observations in Pickwick Basin show that at least three, possibly four, sites were occupied in Archaic (1) times. See Ct°27, Lu°67, Lu°59.*

Archaic (2)

In all deep middens of Pickwick Basin worked flint makes its appearance rather abruptly by the occurrence of large, ovate, blue flint blades about six inches long, sometimes having one end brought to a straight edge with square corners. This type of crude flint blade represents the very earliest worked flint on many sites. This flint type became the dominant end product, of flint workshops which were developed on the shell middens, very soon after the first appearance of flint. On the earlier middens some of the workshops are quite extensive. These shop sites, presenting concentrated layers of flint spalls, and rejects, occur immediately above strata showing the first few specimens of worked flint. The conclusion is forced that in such middens, flint was at first unknown. Then abruptly an abundant supply of dark blue flint was available, and it was worked by percussion fracture only. After the shop site was once developed on the midden, flint artifacts became common, and remained so for all

*Webb, Wm. S., and DeJarnette, David L., 1942. pps. 131, 202, and 263.

later levels. However, after the shop site stratum was covered by later occupancy, shop sites were never again important features in the middens. The introduction of worked flint in the shell mounds, (see shop sites of Ct°27) is taken as the beginning of Archaic (2) time period, which terminated only when Archaic (3) period began.

Archaic (3)

Occupancy in this period produced many forms of artifacts in bone, stone and shell, but there was yet no pottery. In Guntersville Basin, and in many sites in Wheeler Basin, cooking vessels of steatite and sandstone were used. Archaic (3) is taken to begin at the time when stone vessels were introduced and to terminate with the introduction of fiber tempered pottery. The source of stone vessels seems to have been to the eastward, since fragments of such vessels are found on many sites in Guntersville Basin, and in the eastern portion of Wheeler Basin, which includes site Ma°48, reported herein. While one vessel has been found as far west as Lu°59 in Pickwick Basin, evidence of the use of stone vessels is definitely more pronounced as one moves eastward on the Tennessee River in Alabama, from Pickwick to Guntersville Basin. It appears that there is no observable time difference in the appearance of steatite vessels and sandstone vessels, but both occurred in prepottery times. It is believed these stone vessels were made by shell mound dwellers who had developed the technique of cutting them out, and had located the quarry or source of supply of stone. Their use does not suggest the introduction of stone vessels as the result of trade with other peoples.

The term "Archaic" may apply with some justification to all of the prepottery period of the shell mound occupancy, but after the introduction of pottery a new designation may be more appropriate.

Pottery (1)

Most shell mounds on the Tennessee River have a pottery zone, usually only a few feet in depth, and often it is a relatively small portion of the total midden, but easily separable from the

*Webb, Wm. S. and DeJarnette, David L., 1942. p. 249.

deeper prepottery zones. Without exception, the major types of tempering material in order from the bottom upward are invariably fiber temper, grit temper, and shell temper. It is easily demonstrated that in shell mounds, fiber tempered pottery occurs first, but always in small quantities. This suggests that while it was the first used, it may have been received by the shell mound dwellers as an article of trade. Its appearance marks the beginning of the time period "Pottery 1," and may indicate contact with other peoples who were **not** shell mound dwellers. Pottery (1) time period ends with the introduction of grit tempered pottery.

Pottery (2)

How long fiber tempered pottery was in use before grit tempered ware was introduced is not determinable, but "Pottery 2" period began with the introduction of grit tempered pottery. After the first appearance of grit tempered pottery, there were quickly developed many and varied forms of vessels, and techniques of surface finish, and the amount of pottery in use on shell mounds became relatively great, if one may judge by the number of sherds in the middens. The quantity, and variety of grit tempered ware in the pottery zones seems to indicate that it was made, used, broken and discarded on the shell middens. This is probably the first pottery surely made by the builders of shell middens. In "Pottery 2" time period, the cultural complex corresponds to what is elsewhere sometimes designated as Woodland. This was an important manifestation in time and evidences of it are widely spread over the Southeastern U. S.

Pottery (3)

This period begins with the introduction of shell tempered pottery into the very top layer of shell midden where it occurs, if at all. Complete vessels of such pottery are found, for the first time in quantity, accompanying burials in shell mounds. The broken sherds of shell tempered pottery are relatively few in number in the midden debris. Shell tempered pottery seems clearly not to have been made by the dwellers on the shell middens; but its occurrence seems to be the result of the burial of the dead; of a people who did not live on the middens but who desired that their dead be accompanied by mortuary vessels. These people, beside using the middens for cemeteries, contributed little

or nothing to the increase of the midden depth. These extended burials with pottery accompaniment, definitely belong to a different people from the shell mound folk. They are easily identified with the so-called Middle Mississippi occupancy of prehistoric times. With the advent of these people, the shell middens ceased to grow in depth, and their archaeological record from then on fails to reveal additional stratigraphy.

There has, thus, been set up an arbitrary six step chronological scale for the purpose of relating, in time, the various stratigraphic levels of the many shell middens on the Tennessee River. It is quite impossible to determine the length of time involved in the individual time bands. One may gain an impression of the passage of time by the amount of debris deposited, or the change in material content of strata from one time period to another, but since there is no way of measuring the time rates of these changes, the actual length of any time interval cannot be known. It should be remembered that in setting up this chronological scale no attempt was made to assign diagnostic traits to any horizon. The beginning of each time band was defined in terms of objective criteria which are easily observable by excavation, and have been repeatedly discovered to exist in many sites. These time bands or horizons may be briefly tabulated as follows:

- Archaic (1) From the earliest occupancy of the shell middens on Tennessee River to Archaic (2) times.
- Archaic (2) Begins with the introduction of worked flint in the middens to Archaic (3) times.
- Archaic (3) Beginning with the introduction of sandstone and steatite vessels to Pottery (1) times.
- Pottery (1) Beginning with the introduction of fiber tempered pottery to Pottery (2) times.
- Pottery (2) Beginning with the introduction of grit tempered pottery to Pottery (3) times.
- Pottery (3) Beginning with the introduction of shell tempered pottery to the Historic Contact Period.

CHARACTERISTICS OF EACH TIME ZONE

Having defined objectively these six time bands, which constitute a series of time intervals of unknown duration (long or short) through which the shell mound people have developed their complex cultural manifestation, it is necessary to consider the cultural content of each time band separately. In order to understand any one of these periods or stages of development, one must know its material culture, i. e., the associated artifacts, and also the habits and customs of the people of the period as revealed by excavation. Only by evaluating the total cultural content of each time zone separately can one appreciate the long road traveled by these people in reaching their final cultural manifestation. In the following tabulation there is listed some of the outstanding observable traits in each time zone. These traits are not diagnostic of the zone in which found since they are frequently found in diminishing numbers in later time zones. Obviously the trait list for each zone is not complete, no attempt has been made to make it so, the immediately purpose being merely to point out outstanding trait associations in each time band. After further study it is hoped that these trait lists for each time zone can be made reasonably complete.

Archaic (1)

Bone projectile points (double pointed), abundant

Split bone awls, abundant

Antler section with transverse hole (shaft straightener)

Fire pits

Absence of worked flint, but abundant cut and worked bone

Round graves

Cremation in situ (rare)

Extended burials (3b Type) legs bent back on body (rare)

Graves usually devoid of artifacts

Archaic (2)

Flint work shop on midden

Flint types 3, 23, 25, 26, 52, abundant and dominant

Flint types 30-38 are introduced, reach maximum and disappear

Hammerstones

Bell shaped pestles

Clay hearths

Antler atlatl hooks

Artifacts cut from human bones (skull cup bowls, gorgets, awls)

Cremated remains, redeposited frequent

Round graves

Fully flexed burials

Extended burials, legs bent back on body

Graves, rarely, have flint artifact

Dog burials in midden

Archaic (3)

Flint types 6, 8, 16, 22, dominant

Antler drifts, antler spear points, antler atlatl hooks

Antler head dress

Stone gorgets, stone atlatl weights, clay hearths

Stone, (cylindrical and barrel shaped) beads

Disc shell beads, shell pendants

Round graves, sometimes dog burials in human graves

Sitting burials, pit often covered by large stones

Stone vessels (steatite, sandstone) in graves, inverted over head of sitting burials, (most frequently occur in graves of infants and young children)

Partially flexed burials

Headless burials, some otherwise dismembered

Sitting burials frequently accompanied by many artifacts as stone bar gorgets, bone awls, antler drifts, animal jaws, beaver incisors, and flint projectile points of type 58.

Pottery (1)

Fiber tempered potsherds in midden

Sand tempered sherds in midden in small quantity

Flint types 7, 13, 18, 27

Long cylindrical shell beads

Antler projectile points

Burials partially flexed

Burials sometimes headless or dismembered

Cremation but rarely

Pottery (2)

Grit tempered potsherds in midden

Wide range of vessel forms and surface finish

Flint types 6, 8, 16, 22, 44, maximum

Antler spearpoints, antler drifts

Stone gorgets

Limestone celts and hoes

Burials partially flexed

Increase in the number of burials with artifacts but no pottery used as burial offering

Slight evidence of possession of copper

Cylindrical shell columella beads, oblique end perforated

Shell gorgets and pendants

Pottery (3)

Extended burials intruded into midden

Burials accompanied by artifacts and much shell tempered pottery in a wide variety of forms

In this period the midden was used as a cemetery and not as a dwelling site, by a different people, who buried their dead in these extended graves in the midden. Their artifacts are not usually found in the midden debris, and they added nothing to the midden depth, save these burials. This use of the shell midden represents a complete break in the long history of the peoples of the Archaic periods.

By thus using observable stratigraphy the long occupancy of the Archaic peoples has been divided into time zones, for the purpose of chronological comparison of the different sites. It must, however, be remembered the **many types of artifacts** as well as **non-material traits** found in one time zone often extended into later zones, indicating a **continuity of occupancy** by the same people. Thus, these observable changes in the cultural traits of the shell midden dwellers may be ascribed to their own development, always with the possibility that there may have been some outside contact with other peoples, especially after the introduction of pottery. The pottery zone in most shell middens is but a small part of the whole.

Because of the cultural continuity manifested in these great middens, some of which may represent centuries of occupancy, and in the light of the observable development and differentiation among these time zones, it becomes difficult to believe that the so-called Woodland manifestation as it appears in the Southeast could have had any other origin than the Archaic people who dwelt on shell middens such as occur along the Tennessee River in Alabama.

THE FLINT RIVER SITE

Ma° 48

Site Ma° 48 is located in the NE Quarter of Section 21, Township 6 South, Range 1 East, Madison County, Alabama, on land purchased by the Tennessee Valley Authority as a part of Wheeler Basin. Situated on the right bank of the Flint River where that stream empties into the Tennessee River, the spot, now marginal to Wheeler Lake, was an ideal location for an Indian village. Fertile, red clay bottom lands flank the rivers and a margin of trees and underbrush along the banks provides a refuge for small game and wild birds. Even today the region around the mouth of the Flint is known as a good hunting area and is a favored fishing place. The unfailing supply of fresh water was an important factor in the selection of this place as an Indian village.



Figure 1. Looking across the mouth of Flint River, the Tennessee River (Wheeler Lake) at the left. In the distance, excavation of the site just beginning. In the foreground a "musseler" and his boat equipped for "musseling".

Figure 1 shows the site, a great shell midden, viewed from across the mouth of Flint River. The photograph was taken when the excavation was just starting. If the ancient occupants of this site who gathered tons of river mussels for food, and cast away the shells as worthless, could return to view their place of abode, among the many changes they would note, not the least would be the reversal in relative value of the shell and shell fish. They would find their modern prototype still gathering mussels from the same river bars, but with quite different equipment, and for a very different purpose. In the foreground of figure 1 is shown a typical boat equipped for "musseling" on the Tennessee River. Before the building of dams changed the river level so as to make "musseling" impossible, scores of men living in shanty boats and transient camps along the river made a precarious living gathering shells for button manufacture. The horizontal rods carrying scores of lines to which are attached wire hooks, as shown in the photograph, are tossed into the river and dragged along its bottom. When a wire touches a mussel, the pelecypod takes hold, and holds on of its own accord. Periodically the rods are raised and the clinging mussels are detached from the wires and dropped in the boat. At camp the mussels are heated in great vats of water to free the fish from its shell. The shells are sorted and piled for sale and the content of the vats periodically emptied on the river bank and allowed to decay. Barges on the river, carrying tons of shell maintain a buying schedule to procure shells for button manufacture.

Thus the shell fish, once so valuable to the Indian for food, has become worthless, and even a nuisance as the terrible odor about a "musselers" camp can demonstrate, yet the once worthless shells discarded by the Indian, are now a valuable article of commerce, the gathering of which may yield a living to the "musseler" although often a very meager one.

Prehistoric occupation of the Flint River Site over a long period of time resulted in the accumulation of a large quantity of refuse material and the gradual building up of a shell mound rising 7 or 8 feet above the present level of the adjacent fields. The slope of the mound is very gentle and, except on the river banks, almost unnoticeable from a distance. Cultural material has been found to an average depth of 10 feet below the present level of the mound, and even deeper in pits and along the sloping bank of the Tennessee River.

Before excavation was started the site was easily recognized by the vast quantities of broken mussel shells, potsherds and flint projectile points and flakes covering an area of approximately two acres. Cultivation over a period of many years in historic times probably has reduced the original height of the mound slightly and correspondingly spread material over a larger area than that of the original occupation. A few places in the mound had been disturbed by previous digging, but this did not result in serious damage. It is known that two or more houses have stood on the site in the past fifty years, but their presence left no noticeable effect on the mound structure.

This site was investigated by Moore* in 1915. Of it he says:

This aboriginal site has upon it at present various structures, and at the time of our visit a part of it was in use as a vegetable garden, so that the space open to investigation was somewhat restricted.

At a point where there seemed to be a rise above much of the remainder of the site, holes were put down, showing the deposit to be almost solid shell at first, then midden soil having a slight admixture of shell, this underlaid again by shell, the whole going to a depth of 6 feet 9 inches, where brown sand with occasional shells was found—even this not being the bottom of the deposit.

Realizing that search at this depth would be inadvisable to prolong, owing to the time required for holes so deep and in view of the fact that burials found had nothing with them, thirteen trial holes only were sunk in the higher part of the site, resulting in the finding of the skeleton of a child, 26 inches down; a burial closely flexed to the left at a depth of 22 inches; a skull with the two upper vertebrae, 4 feet 6 inches from the surface; a skeleton closely flexed on the left, 1 foot down. A few other holes were sunk in outlying parts of the site but without success.

*Moore, C. B. 1915. p. 278.

METHOD OF EXCAVATION

Clearing and excavation of the site began on June 13, 1938, and to December 22, 1939, there had been expended 7,395 man days. Interruptions in the work for a week or more were experienced on several occasions, due to weather conditions, transportation difficulties, and river floods.

The general plan of excavation was to clear a profile along the face of the bank of the Tennessee River, as shown in figure 2, and then follow the "block" technique, which has proved to be very satisfactory in the excavation of shell mounds. This method consists in isolating a large block, 25 or 30 feet on each side, thus exposing the profiles on four sides from the surface to the bottom of all cultural deposits. The block is then removed in layers and all cultural material found in each square and each level is labeled accordingly, there being no chance of any material falling from a higher level than that at which it was found. Drawings are made of all four profiles of each block after its isolation and the structural features within the block are recorded as excavation proceeds. This method of excavation is illustrated in figures 6 and 9 which present Blocks 1, 2, and 3, and also in figures 5 and 7 which present Blocks 4 and 5.



Figure 2. The ten-foot profile. Note zones of compact river silt and "slide" due to thick shell lens. The fifteen-foot profile has been cut down six feet.

Excavation of the site was started on the Tennessee River bank where a long profile was first exposed on the 10-foot line. Because of irregularities in the face of the mound and the slope of the bank, it was necessary to step this profile back to the 15-foot and 20-foot lines for part of the distance. Several well-defined strata, alternating levels of shell and silt or sand, were seen in this exposure. This composite profile is shown in figure 2. Because the shell layers were thick on the river slope and not well consolidated, several "slides" occurred at points of shell concentration. The bottom of the cultural deposits had not been reached when heavy rains in July caused a rise in the river level and resulted in the caving off of large sections of the profile. As the river rose, attempt was made to have the profile by dumping over slack earth. This proved ineffective because of the height to which the water rose. Figure 3 shows the river coming into the trenches, and figure 4 shows it at maximum height. After the water subsided, the profiles were dressed to the 15-foot and 20-foot lines and isolation of the blocks was started. Figures 5, 6 and 9 present the topography of the site, and portions of the trench system which isolated five blocks, which were later cut down by half-foot levels.



Figure 3. Flood water rising against profile. Earth thrown against profile to prevent cave-in proved ineffective. Looking toward mouth of Flint River.

Isolation of Blocks 1, 2, and 3 was carried on simultaneously. Block 1 was made 30 by 35 feet square. All three had their north sides on the 50-foot line. When the isolating trenches were excavated into sterile sand it was found that the deep, stratified deposits revealed in the profiles on the south exposures resulted from the accumulation of refuse and midden material on the original river bank and the deposition of sand and silt by floods at intervals during the process.

With the trenches completed, excavation of the blocks was started. Six-inch levels were removed over an entire block and cultural material sacked and labeled according to the 5-foot square and 6-inch level. At the 6-foot level below the surface in excavating Blocks 1, 2, and 3, the layers were increased to one foot instead of 6 inches.



Figure 4. Flood at maximum height looking toward Tennessee River.

In the excavation of the blocks it was unfortunate that Block 1 was the first undertaken since it proved to be more cut up by pits than the others. Of the first three blocks isolated, Block 3 showed the clearest differentiation into natural zones. This is well shown in figure 40, which presents the profiles on the four faces of Block 3. Since Blocks 1, 2, and 3 were laid down on a sharply sloping river bank, the river face of these blocks at the

10 and 20-foot profiles were much deeper than at the 50-foot profile. The very sharply dipping shell deposit is well shown in figure 6 which presents the western face of Block 3. Four natural zones are easily recognized and can be traced through all five blocks so far excavated, except on the west section of Block 1.

As a precaution against a repetition of the damage done in the July flooding, the refuse earth was built into an embankment which was intended to hold the water out of the excavations, see figure 6. After Blocks 1 and 2 had been completed and Block 3 had been removed to the 6-foot level it was found necessary to leave the site for the winter (January 26, 1939). During February unusually high waters completely inundated the site and all standing profiles were badly damaged.

When work was resumed on April 10, excavation of Block 3 was completed, profiles were cut again and Blocks 4 and 5 were isolated, see figure 5.

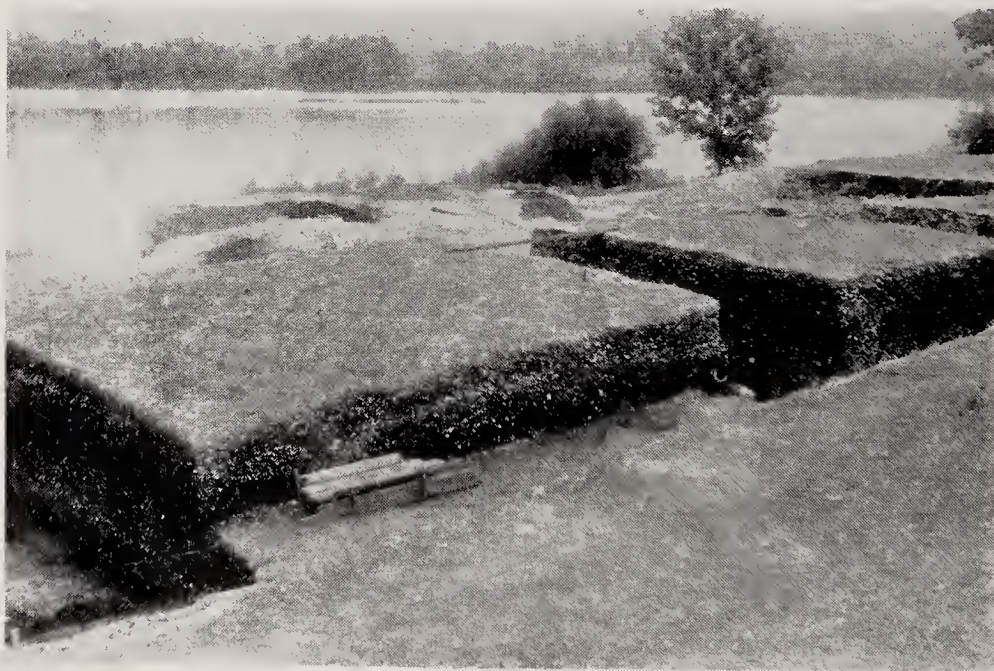


Figure 5. View of Blocks 4 and 5 isolated.

When operations were again suspended for the winter (December 22, 1939), Blocks 4 and 5 had been completely excavated and work in the isolating trenches for two more blocks north of these was well under way.

CHARACTERISTICS OF NATURAL ZONES

Zone A

Zone A is the top stratum at the site and overlies the entire mound to a depth of 2.0 to 2.5 feet. It includes the disturbed top soil and humus level of about a half foot in thickness. Zone A is composed largely of shell—principally river mussels, but also some gastropods—mixed in varying degree with silt. In most places the dividing line between Zones A and B is quite distinct, although in others it is less clearly defined. Occasional fire hearths of reddened clay or yellowish ash, together with fire-blackened or burned shells and charcoal are seen. The zone is a typical midden accumulation with many concentrations of unmixed shell forming lenses within the zone where they had apparently been thrown in a pile. The general impression, however, is one of uniformity of heavy shell deposit.

Pits originating in Zone A and extending into lower zones are common. These pits vary in size from 0.2 of a foot to 10.0 feet in diameter. The smallest ones probably are due to filling in of post holes or holes left by decayed tree roots. A few of the larger ones held burials; others seem to have been fire pits



Figure 6. General view looking S.E. Block 2 at 8.0' level. Block 3 at 3.0' ft. level.

although there is no indication of clay linings or other preparation of a hearth and the evidences of fire are usually slight and often lacking entirely. In some pits there were found enormous quantities of mussel shells (these frequently paired) almost un-nixed with silt. One pit, on the 65-foot line between R15 and R20, figure 8, shows such a deposit of clean shell very clearly. A hearth underlies the shells in this illustration and a lense of burned shell covers the clean shells.

Burials are not uncommon in Zone A. The normal position is flexed and on the side. There seems to be no regularity in the choice of side or in orientation of the head. Most of the Zone A burials are badly broken. Pits for burials inclusive in the stratum cannot be recognized. Occasional extended burials in Zone A appear to be intrusive from the surface and are to be attributed to a later people who resided temporarily at the mouth of the Flint, but who seem to have left little other indication of their occupancy.

Potsherds are found in quantities—several hundred fragments in a 5-foot square—in Zone A. A field check indicated that most of the sherds have limestone temper. Nearly all of the remainder are shell-tempered and belong to the period of occupancy responsible for the extended burials. In one instance, the only association of a pottery vessel with a burial, the skeleton was fully extended and was furnished with a shell-tempered bowl, a pottery elbow tobacco pipe, and other artifacts, see figure 15.

Bone artifacts are frequent in Zone A. Awls in various forms predominate, but fish hooks, needles and other implements are also common. Many of these show high polish and occasional engraving is seen. A socket type handle made from a deer femur, as shown in upper right, figure 34, is often seen. Antler drifts in varying sizes are common. Shell beads are found by themselves and associated with burials, although the burials of Zone A are generally unaccompanied by funerary accessories.

Flaked flint projectile points and knives are very common. These are generally plain stemmed points with round shoulders and made of gray chert. Other stone objects—especially axes—are less frequently seen.

No objects of European manufacture that would indicate a period of Indian and white contact have been found.



Figure 7. Block 5 showing natural zones on O line.

Zone B

Separating Zone A from a second layer of shell (Zone C) is a stratum of silt called Zone B (see figure 7). Through most of the mound it forms a clear band of black earth from 1.5 to 2.0 feet thick between the two lighter-colored shell zones, but west of the L20 line it thins out and disappears. A similar thinning and possible absence seems to occur north of the 100-foot line, a condition to be checked by further excavation.

In its pure form Zone B appears to be fine, flood-deposited silt, lacking artifacts or other cultural manifestations. That it is entirely the result of a flood is not certain. A portion of it may be, instead, a humus level which developed during a period of abandonment of the site between the occupational horizons represented by Zones C and A.

Much of Zone B, throughout the site, was mixed with Zone A material by repeated digging into it from the shell level above, in some places resulting in a very distinct division of the zone into two sub-levels. This division is clearest on the 85-foot line, the south face of Blocks 4 and 5, figure 8. Recorded as Zone B

material because it occurred below the concentrated shell of Zone A, the artifacts and potsherds from this mixed portion of Zone B are all of the same types as the Zone A material and are undoubtedly part of the same cultural horizon.



Figure 8. Pit in 65' profile at R17, Block 5.

Fire hearths form one of the most distinctive features of Zone B. While very common, these hearths seldom show clear outlines of edges but are often only blotches of burned soil in varying shades of red and yellow. There is considerable overlapping of these hearths indicating that temporary, short-lived fires had been made in many places rather than repeated use of the same spot as a definite fireplace. Most frequently these hearths are at the top of Zone B overlain directly by Zone A, but they are found also somewhat deeper in the zone all the way to the bottom.

Another feature often encountered in Zone B is a charcoal-filled pit. These pits ranging from 0.8 to 1.5 feet in diameter and from 1.0 to 1.8 feet deep, are filled with charcoal fragments. The charcoal is mostly from burned cane, although occasional twigs from trees may be found. Artifacts are absent or very rare in the pits, which are often covered by a hearth of the type just described. In numerous cases the pit walls have been burned

to a brick red for as much as a tenth of a foot, giving the appearance of a prepared lining.

Most of the burials found in Zone B were in pits clearly intrusive from Zone A. These burials recorded as inclusive in Zone B were ones for which no pit lines could be distinguished but which actually originated from the shell zone above. Two plausible explanations of this condition may be given: (1) The pit was dug and the body interred before any appreciable amount of shell had accumulated on what was then the surface of the mound. That means that the burials date from the beginning of the occupation of the "Zone A people." (2) If a later burial, made after considerable deposition of shell in Zone A, great care was taken to refill the pit with only the Zone B earth after the burial was made. Other pits recorded as intrusive from B to C probably had similar origins.



Figure 9. Excavation in progress. Block 1 at 5' level, Block 2 at 4' level. Block 3 at 0 level.

Zone C

A second stratum of heavy shell deposition, 2.5 to 3.0 feet thick, form Zone C. Probably owing to greater age and the pressure of the overlying deposits Zone C is more compact and uniform than Zone A; fewer shell lenses are present and the distribution of shells and earth is more even. The division be-

tween Zones C and B is almost everywhere clear and sharp, figure 8. The shells in this zone are softer and more leached than those of Zone A, but no differences of species has been noted in the field.

Hearths are less common in Zone C than in the upper levels and of a different type when they do occur. The Zone C fireplaces are distinguished by piles of river pebbles, generally cracked or broken and discolored by heat. Mixed with the stones are shells and fragments of charcoal. These hearths appear to have been used more constantly than the ones typical of Zone B.

Inclusive pits are more easily recognized in Zone C where they frequently contain burials. Many burials in this zone, however, show no traces or pit lines. Pits intrusive into Zone D are common both as burial pits and those without distinguishing characteristics.

South of the 40-foot line Zone C increases greatly in thickness where it follows an earlier slope of the river bank. Here, too, it is split into thinner bands by sterile sand layers deposited during previous periods of high water. This condition is particularly well-illustrated in Block 3, see figure 6, and shows across the entire profile on the 10-foot line.



Figure 10. Block 5 at bottom of cultural deposit. Note pits intruded into sterile sand.

Burials in Zone C are typically flexed. No particular attempt at orientation is noted and the degree and form of flexing varies considerably, see figure 18. The skeletons are almost invariably badly broken and crushed from the unequal pressure exerted by the weight of the earth forcing shells against the bone. A not uncommon practice was the placing of large limestone slabs on the bodies, usually over the pelvis or abdominal region. The burial in pits are more fully flexed than those where pits are not distinguished. Some of these are of the "slumped sitting burial" type, figure 18, while others appear to have been doubled up merely in an effort to make them fit into the pit, with little regard to position. Sandstone or steatite bowls are sometimes inverted over these pit burials, as shown in figure 11. Here five sandstone bowls were inverted over Burial No. 156, Figure 12 shows burial with the bowls removed.

Zone C is definitely a pre-pottery horizon. The sherds found below the top of the zone can all be attributed to intrusive pit from above. Bone artifacts are common, with somewhat greater use of antler than was noted in Zone A. Flint is found about as abundantly as in the later horizon. Stone artifacts, other than flint, are more often found in Zone C than in Zone A. Limestone axes and hoes are frequently seen. Slate (shale) objects with one or more grooves apparently used for polishing



Figure 11. Five sandstone bowls inverted over Burial No. 156.

or pointing bone implements may prove to be diagnostic of the complex. Conical sandstone pipes have been found in association with burials as have shell beads, see figure 17. Sandstone and steatite bowls are typical. Animal bone—unworked—is found in much greater quantities in Zone C than in the higher levels.

Zone D

The lowest culture-bearing stratum at Ma°48 lies directly on a base of sterile sand. Zone D, averaging 2.5 to 3.0 feet thick in most places, is distinguished from the mound base principally by its color and by the inclusion of varying amounts of shell scattered through it. The line separating Zone D from the base is often made indistinct as a result of rains filtering through and discoloring the otherwise clean sand. The division between Zones C and D is also difficult at times although ordinarily the distinction can be determined by the amount of shell and by the yellowish, sandy soil of Zone D compared with the gray-black silt in Zone C. Pits from Zone D into sterile sand are very common, see figure 10.

The cultural remains in Zone D, except in their diminished



Figure 12. Burial No. 156 after removal of the five inverted sandstone bowls in grave pit. Note that this is a "sitting burial", feet together, knees elevated spinal column once erect against pit wall has collapsed, allowing head to fall face downward into pelvic cavity.

number, show little difference from those in Zone C, and it is probable that Zone D is in a relation to Zone C very much like that which Zone B holds to Zone A.

Burial types are the same as in Zone C but with a greater proportion of the "slumped sitting" type, see figure 12. The use of stone bowls inverted over the burials (usually infants) is frequent, see figures 11 and 13. In general the skeletons from Zone D are better preserved than those of any other level. This is due to the fact that the sand, almost unmixed with shell, serves as a protective cushion around the bone and the twisting pressure of shells is practically eliminated.

Features

There are 32 features listed for special description of which 19 were dog burials. Dogs seem to have been buried in pits or prepared graves in all zones. They were not placed in the grave with human burials here, as they have been found elsewhere. Figure 19 shows a burial of two dogs probably buried at the same time.

The remaining 13 features may be classified as follows:

Fire hearths	4
Fired areas in shell	2
Fire hearths with river pebbles	2
Piles of stones	2
Fire pits filled with ashes and charcoal	2
Flint workshop area	1
Total	13

Burials

From this excavation there were reported 211 burials classified as follows:

Partially flexed	102
Fully flexed	61
Extended	7
Reburials	4
Cremations	2
Disturbed, incomplete and infants whose placement was uncertain	35
Total	211

If no pit was observable the burial was classed as belonging to the zone in which it was found. Where pits were visible, the burial was assigned to the zone in which the pit originated. On this basis they were placed as shown in the tabulation. In the case of 7 burials because of disturbance and intrusion it was not possible to ascertain the zone of their origin.

Of the 211 burials, 50 had some form of burial association and 161 had nothing as shown in tabulation by zones.

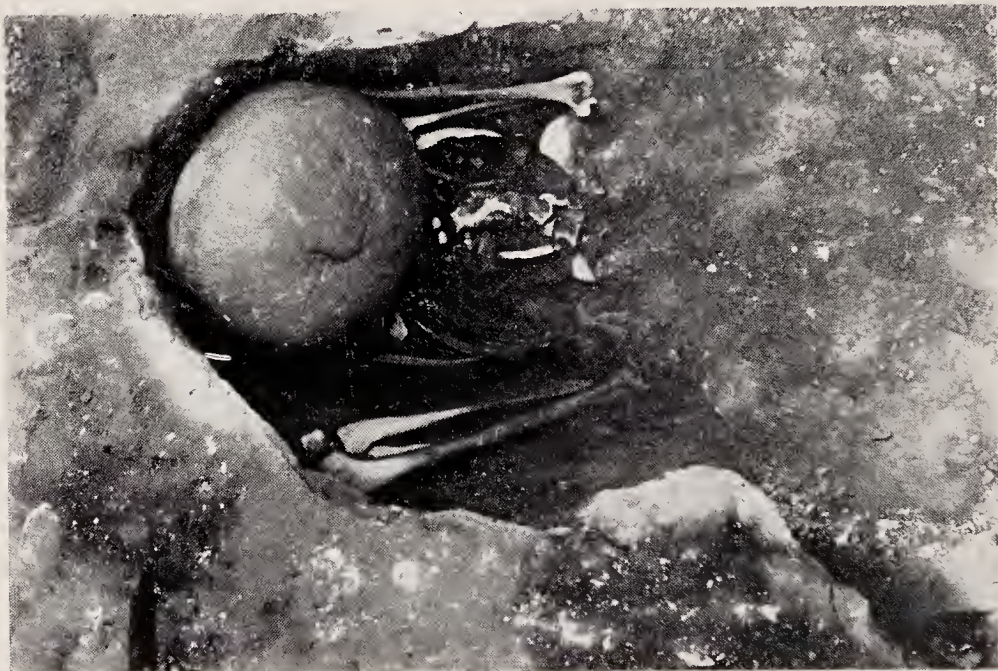


Figure 13. Stone bowl over head of Burial No. 153.

	With Artifacts	Without Artifacts	Total
Zone A	7	25	32
Zone B	0	7	7
Zone C	31	92	123
Zone D	12	30	42
Undetermined	—	—	—
Total	50	161	211

In reporting the burial association it often happens that the artifacts in association are not diagnostic of any particular cultural manifestation or time horizon, and interpretation is there-

fore uncertain. At this site uncertainty of interpretation was increased by the very considerable amount of digging into this midden by later peoples. Several instances at this site were found when later peoples, by very deep graves have deposited their dead in lower zones than the earlier people who built these zones. In loose shell it is not always possible to pick up the beginning of an intrusive pit when excavating by the "block technique" in six inch levels. However, this method of excavation for shell mounds is so superior for stratigraphic information, to vertical slicing, that even this risk of loss of information is considered justified. However, in the "list of burial associations" which follows it is felt that in some cases, for the reason given, it may be that intruded burials are assigned to deeper zones than that from which they were intruded. While in general it is not always possible correctly to assign the time horizon of every burial in any shell mound, in the Tabulation of Burial Associations which follows, a column has been included designated "time horizon". The time horizon of most of these burials has been indicated by appropriate symbols, the meanings of which are explained in the introduction to this report. The significance of these assignments will be explained in the section on *Conclusions*.



Figure 14. Steatite bowl in situ. Zone D.

TABULATION OF BURIAL ASSOCIATIONS

Burial Number	Zone	Depth in Feet	Position	Artifacts	Remarks	Time Horizon	Illustra- tion Number
6	A-B	2.2	P.F.	Limestone celt, flaked, broken		P2	
7	C	3.2	F.F.	9 shell beads, conch columella, small cylindrical, 1 large cylindrical oblique perforations at ends so cord passed along outside of bead, Limestone hoe flaked, side notched, broken.		P2	
					Headless		
11	C	2.0	P.F.	739 disc shell beads (1.5 to 9mm thick and 5.5 to 18mm diameter) and 4 large cylindrical beads columella with oblique perforations at ends, Bone pin, bone awl cylindrical 180mm long, bone awl split fragment, 3 incised bone fragments, matting twilled plaiting, shell beads small disc.		P2	26
13	C	2.6	F.F.	30 bone beads, tubular sections of long bone 2.5mm diameter and 8 to 19 mm long.		P2	27
					Infant		
22	A-C	4.1	P.F.	Flint point, Type 55.		P1	
26	A-B	3.8	P.F.	Flint points, Types 18 and 9.		P1	
29	C	4.2	P.F.	Flint point, Type 9, asymmetrical.		P1	
					Headless		
35	C	6.1	Dis.	Perforated mussel shell.		A3	
41	C-D	8.0	P.F.	Flint point, Type 16.		A3	18
					Assoc. Bur. Nos. 40-47.		
45	C-D	8.2	P.F.	Bone splinter awl.		A3	
					Partial Cremation in situ.		
52	C	5.8	P.F.	Shell pendant excurvate rectangular, 2 perforations 40 x 40mm.		P3	
					Child		
53	C-D	6.1	P.F.	Shale abrader flat, both sides grooved, limestone pipe tubular partially drilled elliptical cross-section 138mm long.		A3	
55	C	6.2	F.F.	Metate flat limestone boulder (10 x 215 x 230mm) depression on one side 175 diameter 18mm deep.			
					Infant		

TABULATION OF BURIAL ASSOCIATIONS (Continued)

Burial Number	Zone	Depth in Feet	Position	Artifacts	Remarks	Time Horizon	Illustration Number
67	C-D	6.6	P.F.	Circular section human skull 2 perforations, 72mm diameter, right parietal, Elliptical section human skull with central construction 2 perforations 74 x 110mm in dimensions.		A2	24
74	C	4.9	Re.	Flint point, Type 9.	Reburial, headless	P1	
79	D	8.3	F.F.	Flint point, Type 16.		A3	
82	C	5.2	P.F.	Limestone hoe, flaked, side notched.		P2	
84	C	5.0	Re.	Sandstone bowl, 126 fragments, not restorable.	Reburial	A3	
89	A	.8	Dist.	Briquette wattle impressed fired.	Headless	P3	
93	C	5.5	F.F.	585 shell beads disc 2mm thick 8mm in diameter, 4 cylindrical beads. 12 x 12mm flint point Type 55, Antler base worked handle, Antler tip flaker, flint point Type 18.		A3	
107	C-D	7.3	F.F.	52 small disc shell beads.		A3	
110	A	2.1	Ext.	Shell tempered jar paired handles, elbow shell tempered pottery pipe 55 x 64mm, 2 greenstone celts; 3 sections rectangular cut turtle plastron 91 x 33mm, 105 x 27mm, 94 x 58mm.		P3	15 24
112	D	7.1	Re.	2 steatite bowls. Shell beads 36 disc and 6 small cylinders.	Reburial Infant	A3	22
122	D	8.0	F.F.	4 shell beads, small disc.		A3	
128	D	8.5	F.F.	Bone pin elliptical cross section expanded head.		A2	
129	C-D	7.2	F.F.	Flint point Type 16.		A3	
130	C-D	7.2	F.F.	Split bone awl fragment.		A3	

TABULATION OF BURIAL ASSOCIATIONS (Continued)

Burial Number	Zone	Depth in Feet	Position	Artifacts	Remarks	Time Horizon	Illustra- tion Number
142	C-D	8.8	F.F.	3 conical tubular stone pipes, split bone awl, flint Type 3, turkey tarsometatarsus awl, shale abrader, 2 chert nodules, 3 flint Type 23 long bone of bird (unworked).		A2	17 20
149	C	4.6	F.F.	Flint point broken.		?	
153	D	7.6	F.F.	Sandstone bowl.	Sitting	A3	13
156	D	8.5	F.F.	4 tarsometatarsal awls, Flint Type 3 and 16. 2 shell beads conch cylindrical, 2 cut canine mandibles, 4 sandstone and one steatite bowl.		A3	23 26
					Sitting		
157	D	7.5	F.F.	Shell gorget, conch circular perforated, 2 disc and 4 cylindrical shell beads.		A3	11 12
					Sitting		
161	A-B	3.2	P.F.	2 pearl beads.	Infant	P3	
169	C	4.8	P.F.	Flint point Type 55.		P1	
175	C-D	8.6	F.F.	Steatite bowl.		A3	21
176	A-C	3.1	Ext.	Antler tip flaker.	Child	P2	
179	C	4.4	P.F.	Flint point, Type 55.	Infant	P1	
180	C-D	4.6	F.F.	3 antler fragments parallel zigzag incising, Flint Type 23.		P1	16
182	C	5.1	P.F.	Chalcedony abrader, spherical, battered.		A3	
183	C	5.3	P.F.	Worked bone, fragmentary point Type 9.	Flint	P1	
					Infant		
185	D	9.0	F.F.	Shell beads 18 medium cylindrical, 113 medium disc and 25 small disc, Triangular conch shell gorget, 3 conical perforation maximum width 44mm, length 182mm.		A3	24
				Slumped sitting burial			
188	C-D	6.8	F.F.	Fragment bone pin 185mm long, tibiotarsal turkey bone awl obliquely cut.		A3	
					Sitting burial		

TABULATION OF BURIAL ASSOCIATIONS (Continued)

Burial Number	Zone	Depth in Feet	Position	Artifacts	Remarks	Time Horizon	Illustration Number
190	D	8.4	F.F.	Flint points Type 55 and 3, Sandstone bowl, 36 small shell disc beads. 13 anculosa beads, rodent mandible, limestone hoe side notched.		A3	22 b, d
191	D	10.1	P.F.	Flint point, Type 9 flint graver.		A3	
195	D	8.9	P.F.	Stone pipe conical tubular 65 x 55mm grooved shale abradar.		A3	
201	D	8.2	P.F.	2 conch columella shell beads 13mm x 10mm, Flint points, Type 16 and 55, 2 split bird bone awls Antler drift, Antler tip, perforated Antler tip, terrapin carapace.		A3	
				Sitting burial			
205	C	5.2	P.F.	86 small disc shell beads.		?	
				Child			
206	C	5.5	P.F.	Flint point, Type 1.		?	
210	C-D	8.7	?	Steatite bowl, 40 small disc shell beads.		A3	21a
				Infant			
211	C	2.9	P.F.	4 small disc shell beads.		P2	



Figure 15. Extended burial No. 110. Elbow pipe and shell tempered pot with strap handles.

ARTIFACTS

A summary of the artifacts in burial association follows :

Limestone hoes notched	3
Flint Points	24
Shale abraders	3
Limestone and sandstone conical pipes	5
Metate	1
Sandstone bowls	7
Steatite bowls	5
Greenstone celts	2
Shell beads cylindrical, strings	7
Shell beads disc, strings	11
Shell beads anculosa, strings	1
Bone Beads, strings	1
Shell pendants	3
Pearl beads	2
Perforated mussel	1
Bone awls	13
Human skull gorgets	2
Canine mandibles cut	2
Antler handle	1
Antler tip flakers	3
Carved antler fragments	3
Shell-tempered jar	1
Total	101

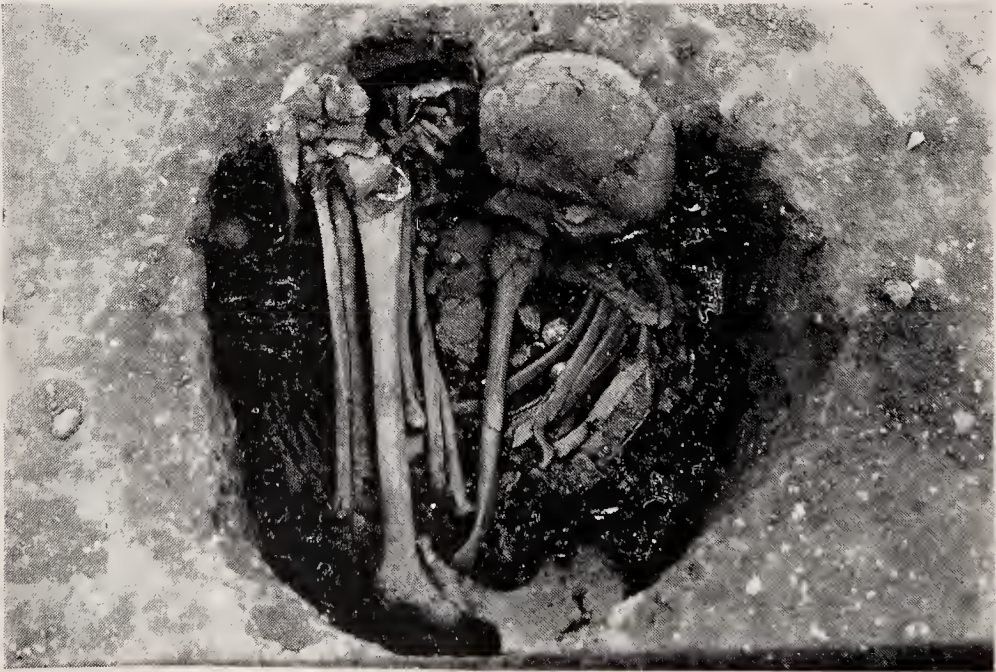


Figure 16. Round-grave burial No. 180.

THE FLINT RIVER SITE
SUMMARY OF STONE ARTIFACTS
(excluding burial associations)

45

Zone	A	A&B	B	E&C	C	C&D	D	Ref- use	total
Celts, flaked	36	1	44		139	11	4	77	312
Hoes, flaked	33	3	29	1	79	3	22	63	238
Hoes, flaked, side notched	9		6	1	63	1	43	29	152
Axes, grooved	2		1		5		16	4	28
Celts, ground, greenstone	10		11		7		2	7	37
Celts, ground, miscellaneous	5		5					6	16
Abraders, grooved	4	1	2		12	1	12	9	41
Abraders, Chalcedony	1				2		4		7
Hammerstones and manos	6		2		4	1		6	19
Bar gorgets	5		9		8			11	33
Bars	11		4		2		2	3	22
Pestles, bell-shaped	1		1		1		1	1	5
Discoidals	5							1	6
Pipes, tubular	1		1		3		1	4	10
Pipes, elbow, double conical	1		1						2
Bowls, steatite							1		1
Bowls, sandstone					1		3		4
Bowl fragments, steatite	9		8	3	81	1	5	76	183
Bowl fragments, sandstone	2		2	1	53		2	65	125
Boatstones, perforated (Fig. 25)					1			1	2
Bannerstone, winged (Fig. 25)							1		1
Shale ovoids, flat, ground	1		1						2
Crinoid stem beads (?)	1							1	2
Metate or lapstone					1				1
Hematite, grooved ground (Fig. 25)					1				1
Limestone ball, ground			1						1
Sandstone scrapers (?) fragments	3							2	5
Grooved pebble, sinker (?)								1	1
Truncated steatite cone	1								1
Worked fragments	21		8		12		3	11	55
Total									1313



Figure 17. Burial No. 142 with tubular pipes and reamers.

The flaked implements which have been termed celts and hoes vary in size from small specimens which morphologically are like the Type 23 "flint" implements to large hoes.

Hoes and celts have been separated arbitrarily on the basis of size, the hoes having greater size and massiveness. The largest implements designated celts are approximately 6 x 3 x 1 inches while the hoes range upward from these dimensions to large implements 14 x 5 x 2 inches.

All of the chipped celts and hoes are made of limestone except eight specimens made of shale and other stone. Generally the celts show a tendency toward elliptical outline, and rhomboidal and trianguloid cross sections, while the larger hoes were flat and had generally a subrectangular outline, as shown in figure 29. The celts and hoes were primarily shaped by rough heavy flaking, probably by percussion. In rare instances pecking or grinding over a limited portion of the implement was observed. The cutting ends of large celts and hoes show smoothing and wear from use. The character of the wear seems to suggest their use as digging tools.



Figure 18. Partially flexed burials Nos. 40, 41, 45, 43, 47 and 50.

Side notched hoes resemble the unnotched hoes except for the side notches and a tendency toward greater width in proportion to length. All were made of limestone except one made

of shale. All were basically shaped by rough flaking. In a few instances pecking or grinding were evident over a very limited area of the specimen. Such modification was most frequently confined to smoothing or shaping the edges of the notches.

Grooved axes were made of limestone except one made of sandstone. Thirteen of the 28 axes were fully grooved, eight were grooved on three sides, one had two sides grooved, and one a groove on one side only. Five were so broken it was impossible to distinguish between a full groove and a three-quarter groove. Occasionally the edges of the groove were slightly raised producing a ridge of flange. Combined pecking and grinding were extensively used in shaping the axes. All axes showed grinding except three which appeared to have been shaped by flaking and pecking. A typical limestone celt, hoe, side notched hoe, and grooved ax are shown in figure 29. It will be observed from the artifact summary how these limestone implements seem to be most prolific in Zone C. While they may have been in use at this site after limestone pottery began to be used, they are clearly to be assigned as to origin to the pre-pottery time horizon.

Greenstone celts as the artifact summary shows were most numerous in Zones A and B, see figure 24. It seems significant that they were found largely associated with the pottery zone and when in grave association only in those graves which were classified as to type as fully extended, and as P3 on the chronological scale, see figure 15. The miscellaneous celts were made of slate, sandstone, schist, limestone, and also were found in the upper zones.

Stone abraders were almost exclusively made of shale, but two were made of slate and one of sandstone. The abraders were generally flat pieces of shale, irregular in outline with one or more grooves on one or both flat faces. It is to be observed that they were somewhat more numerous in the early portion of the midden, and probably were used extensively in the manufacture of bone artifacts in pre-pottery times.

Chalcedony abraders were made from nodules. They were roughly spherical in form. The surfaces are battered, but show subsequent grinding which has produced in some cases pronounced facets. Because of its hardness, these stones were very effective in grinding and polishing stone implements made

of softer stones. The surface of the nodule was apparently first roughened by percussion. This produced a number of cutting edges which were effective in grinding other stones. Some of these abraiders are shown in figure 28.

Except for two hammerstones made of limestone, all hammerstones were water-worn pebbles or smaller boulders. These showed battering over portions of their surface. A few of these hammerstones may have served as anvil stones.

Bar gorgets were usually made of limestone or shale, but slate and other stones were used. They were ground flat and have tapering, rounded or truncated ends, and two biconical perforations. A pronounced central widening of the gorget occurs in a few cases. A few had plane convex cross sections, incised line decorations, and more than two perforations. Typical gorgets are shown in figure 25.

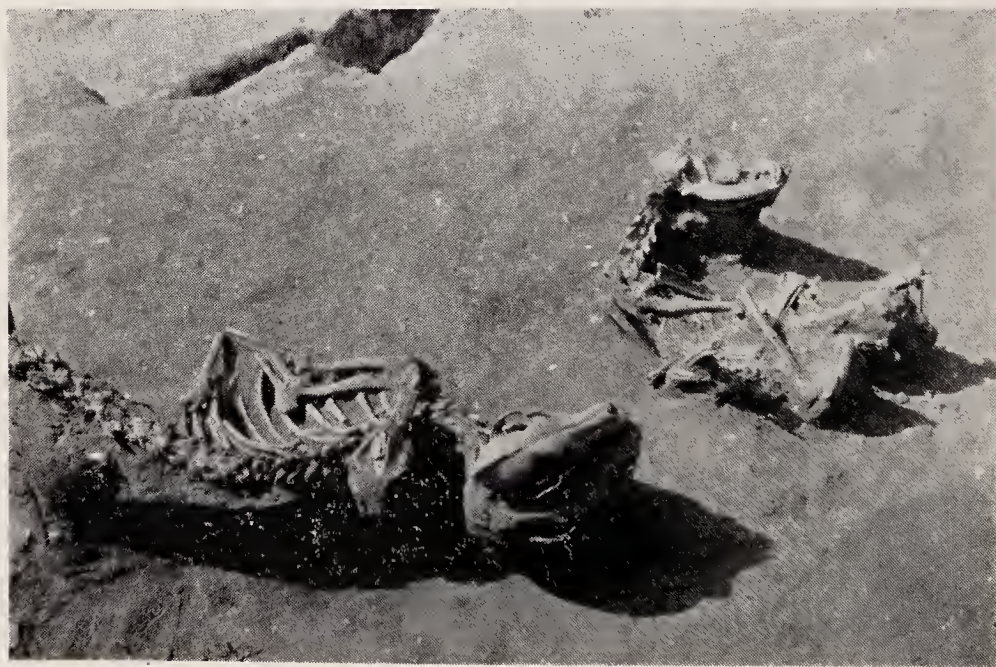


Figure 19. Dog burials in Zone B, Block I.

Stone bars were made of shale, slate, sandstone, limestone, schist, greenstone, steatite, etc. Typical specimens varied in length from 1.75 to 4 inches and had subretangular to plane convex cross sections. A three-quarter groove at or near the center of the specimen occurred in more than half of the unbroken specimens. The grooves were always opposed to the flattest

side of the specimen. Three of the four steatite bars were perforated. Specimens of bars are shown in figure 25. The groove being opposite to the flat side of these bars seems to suggest that they were made to be attached to a flat surface. They could have served as atlatl weights.

Types of pestles are shown in figure 28. A slight central surface of bell-shaped pestles appears. A similar central cavity also appears on some hammerstones which show definite use as manos. These hammerstones are not to be confused with the pitted hammerstones which show no evidence of use for grinding.

Stone discoidals were made of shale, sandstone, limestone, hematite and gneiss. They varied in diameter from 27mm to 70mm. Those made of shale had a central perforation. The hematite discoidal had a plane convex cross section and was "flattened-hemispherical" in shape. It is shown in the upper left of figure 28.



Figure 20. Artifacts associated with Burial No. 142.

Stone tubular pipes were made of sandstone, ground to conical form and reamed with a conical reamer at the distal end. The proximal end had a small cylindrical hole drilled into the

conical bowl. Typical pipes are shown in figure 20. With these pipes in association with Burial No. 142 there was found a pointed flint blade which may have served as a reamer, as shown in illustration. One of these pipes was unfinished, and the others showed interior transverse grooves as if reamed, but by a reamer having a rough outline. One limestone double conoidal pipe shown in figure 28 found without association was a frog effigy. The head was missing.

Sandstone and steatite bowls were so numerous at this site as to constitute an outstanding feature. Nine sandstone and five steatite bowls were found nearly complete and easily restorable. Three other sandstone bowls were crushed and not restorable. Numerous fragments of vessels occurred through the lower zones, showing that many vessels had been used and broken on this site in its early history.

The exteriors of the sandstone and steatite vessels generally show vertical tool markings which tend to converge near the base. One specimen shows mostly horizontal markings, and in some specimens the markings were almost completely obliterated by subsequent smoothing.

The interiors of the bowls were generally well smoothed, although in a few instances partially obliterated tool markings were evident near the lip. Data on 17 perfect or nearly complete stone bowls is tabulated to show shape, size, and association.



Figure 21. Steatite Bowls.
(a) With Burial No. 210.
(c) With Burial No. 175.
(b, d) With Burial No. 112.



Figure 22. (a) Partially restored sandstone bowl with flange handle.
(b) Sandstone bowl with Burial No. 19).
(c) Steatite bowl with two large cut holes and two dulled perforations.
(d) Sandstone bowl without burial association from Zone C.

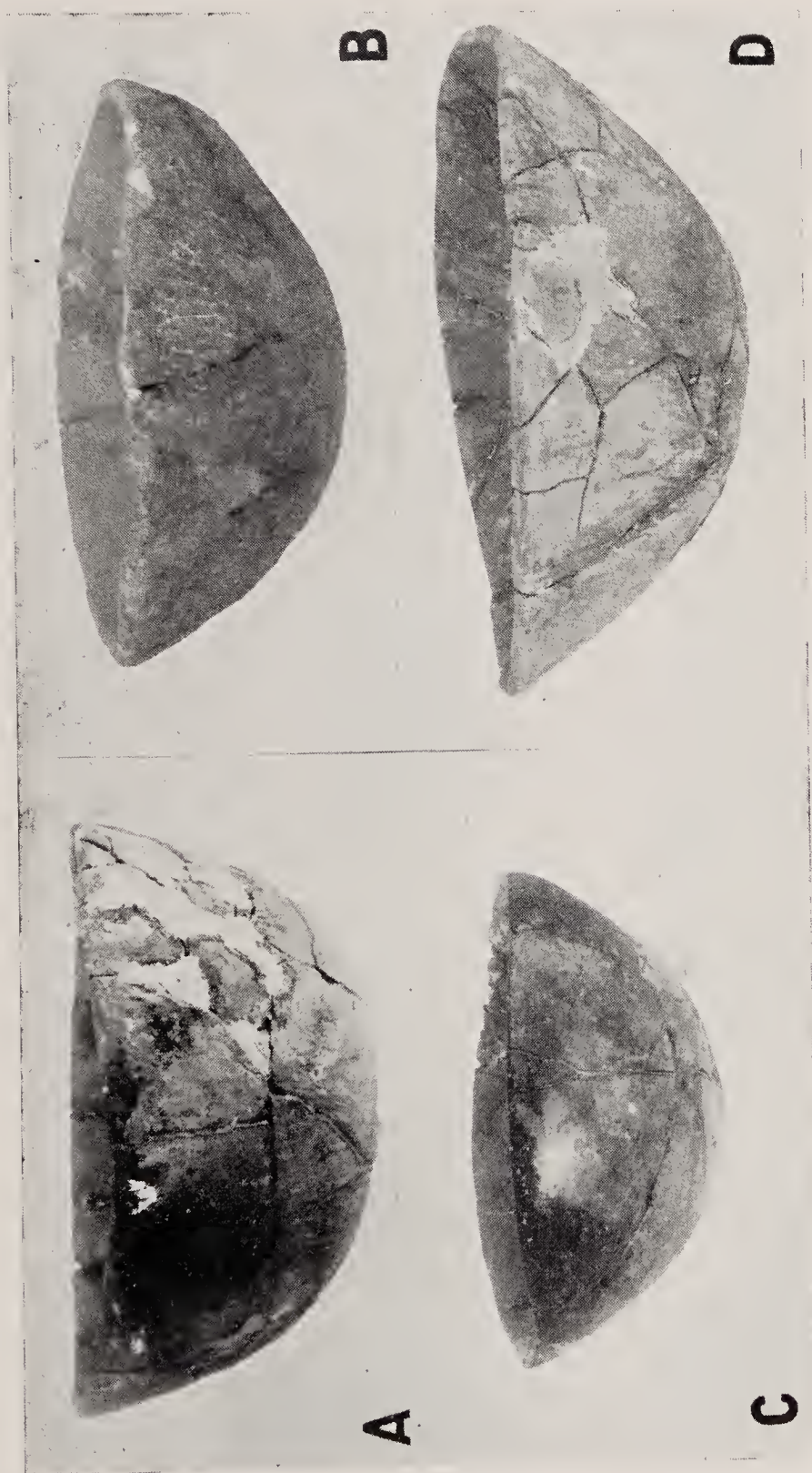


Figure 23. Four of the sandstone bowls with Burial No. 156.

TABULATION OF STONE BOWLS

Material	Horizontal Outline	Base	Maximum Horizontal Dimensions	Height In Inches	Association Burial Number or Zone	Depth	Illustration Number
Sandstone	(not restored)				84	5.0	
Steatite	Subrectangular	Flat	11.5" x 15"	6.5	112	7.1	21b
Steatite	Oval	Round	12.25" x 13.75"	6.25	112	7.1	21d
Sandstone	Oval asym- metrical	Slight- ly round- ing	11.25" x 12.5"	6.0	153	7.6	13
Sandstone	Subrectangular	Round	13" x 14"	6.5	156	8.5	23b
Sandstone	(not restored)	Round			156	8.5	11
Sandstone	Round	Round	18.5" x 18.75"	8.0	156	8.5	23d
Sandstone	Oval	Round	10" x 11"	5.25	156	8.5	23a
Sandstone	Roughly pentagonal	Flat	10.5" x 12"	6.25	156	8.5	23c
Sandstone	Elliptical	Round	8.25" x 11.25"	5.25	Zone D	6.7	14
Sandstone	Round	Flat	10.25" x 10.25"	6.0	Zone D	6.7	
Steatite ¹	Oval asym- metrical perforated	Flat	16.25" x 19"	8.75	Zone D	6.7	22c
Sandstone ³	Elliptical	Round	Partially Restored	8.0	Zone D	7.8	22a
Sandstone	Oval	Round	16.25" x 13"	5.5	190	8.4	22b
Steatite	Round	Round	14.25" x 15"	11.5	175	8.6	21c
Sandstone	Elliptical	Flat	8" x 9.5"	6.25	Zone C	6.0	22d
Steatite ³	Roughly semi- circular perforated	Flat	14.5" x 18.75	7.0	210	8.7	21a

¹This steatite bowl was considerably modified after manufacture. A hole with an approximate diameter of 3.75 inches had been cut in one side of the base of the bowl. The edges of the hole were ground smooth. There were three biconical perforations about one half inch from the remaining edge of the hole. On the side of the bowl about midway between rim and base was a hole 2.75 inches in diameter which was never completely cut through. The cutting of this hole was begun both from the inside and the outside of the bowl.

²This bowl probably had another handle at the other end, similar to the one in Figure 23a.

³Some specimens are drilled near the rim with pairs of holes as shown in Figure 21a. This suggests either an attempt to repair the vessel and prevent the crack from extending, or possibly to provide attachment for a handle of cord or thong.

The depth given in the tabulation of stone vessels is the actual depth where the vessel was found. Where these vessels were in burial association, the burial pit may have originated somewhat above the level of the bowl's occurrence, and thus one gets the impression that most of these bowls come from Zone D. Some were found in that zone, but it will be noted that some of the burial pits had their origin in Zone C. Perhaps the most obvious method of studying the chronology of the use of these stone vessels is to consider the depth distribution of the broken sherds found out of any burial association in the general digging. While the nearly complete sandstone vessels are more numerous than the steatite bowls, yet the steatite sherds are more numerous than sandstone.

It may not be demonstrated but it seems to suggest that steatite vessels were not as hardy as sandstone and were more fragile. A depth distribution of shreds is shown in the summary of stone artifacts.

While some of these fragments of stone vessels were carried up into the later zones, probably as a result of so much aboriginal digging in this midden it is quite apparent that Zone C is the source of these broken fragments and that these vessels were used mostly, if not exclusively, in pre-pottery times.



Figure 24. Associated artifacts. Upper row, except pipe, with Burial No. 67. All others with Burial No. 110.

BONE ARTIFACTS

The bone artifacts listed below are tabulated as to occurrence in zones:

BONE ARTIFACTS
(Excluding Burial Associations)

[illegible]

Cylindrical awls were made from longitudinally split sections of long bones. They were ground down until they showed a circular cross-section. Some of these awls are tapered at both ends, while others have only one tapered end. In most instances only one end of the double-tapered awls shows the wear and polishing which would result from use as a perforator. The tapering of the "non-functional" end of the awl is usually less gradual and less finely executed. For these reasons it is believed that most double-tapered awls were neither intended nor used as perforators with two functional points. See figure 30.



Figure 25. Stone bars, bar gorgets, boatstones, bannerstones, or atlatl weights, grooved abraders and hematite.

Split bone awls include awls from sections of bone which were obtained by cutting long bones lengthwise. Some of these awls show a portion of the epiphysis, while others are made solely from the body or shaft of the bone. Cross-sections of split awls vary considerably. Occasionally split awls are pointed at both ends.

It is to be noted that cylindrical awls, while occurring in all zones, became more numerous in the pottery horizon and that the converse is true of split bone awls. See figure 33.

Splinter awls were made by pointing one end of a suitable bone fragment. The bone fragments used were not cut sections of bone, but were apparently produced by intentional or accidental rough fracturing of the bone. Splinter awls are crude and seldom show working other than at the point.

Cannon bone awls include only those awls made from cannon bones which were not too modified by working to permit easy identification of the bone. Cannon bone awls were either split longitudinally and then pointed or the point was produced by an oblique cutting or grinding of the unsplit bone.

Deer unla awls were produced by grinding or cutting the distal portion of the bone into a point. In some instances a portion of the proximal end of the bone was removed or the proximal end was modified by grinding and polishing. See figure 30.

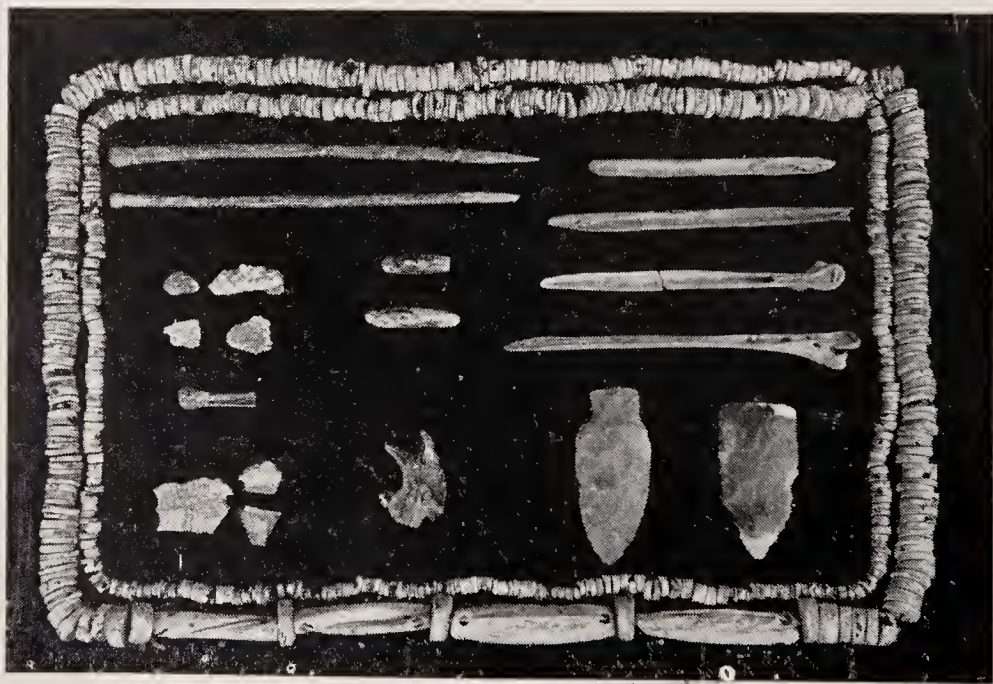


Figure 26. Associated artifacts, beads and vertical row on left with Burial No. 11. Remainder with Burial No. 156.

Bird bone awls were made by cutting or grinding the bone at an oblique angle (or angles) thereby producing a point. Included in this category are three small mammal ulna awls.

Pointed objects made from the tarsometatarsus of large birds may have served either as awls or hairpins or both. Modi-

fication of the bone, produced in manufacturing the awl or pin, varies from oblique removal of one end to form a point, to splitting the bone longitudinally and pointing the end. Usually the proximal and less frequently the distal ends of the bone formed the head of the awl or pin. Awls or pins fashioned from the tibiotarsus occurred very infrequently, and were tabulated in one or the other of the preceding catagories, depending on method of working (i. e., either split awls, or obliquely cut). See figure 30.

The implements termed bone pins resemble bone awls. They generally differ from awls in one or more of the following respects; better workmanship, an expansion of the head, greater degree of polishing, incised decorations on the head. Bone pins vary in cross-section from round and elliptical to flat forms. Cylindrical and elliptical pins frequently show a flattened, laterally expanded head. This flat area may be decorated with incised lines or the outline of the pin head may form a simple design or geometric figure. See figure 33.



Figure 27. Miscellaneous burial associations, beads and triangular pendant with Burial No. 185.

Fish spine awls are large spines which show no visible evidence of working or use, but which because of natural sharp-

ness of point and hardness of bone, may have been employed as perforators. Figure 27.

Bone "bitten awls" resemble awls in size and general proportions. They vary from awls in having their functional end shaped like a bit instead of a point. Implements called "bitted awls" are smaller than "fleshers" and probably served a different function.

Implements termed "fleshers" were made from deer long bones or other long bones of comparable size. The distinguishing feature of these implements is the functional end which is cut and ground to form a bit or cutting edge. See figure 31.

Eyed bone needles were of the general shape of cylindrical awls, except they had an "eye" in the head and usually a smaller diameter. The majority of the needles were highly polished and round in cross-section, although elliptical cross sections occurred. See figure 30.

Bone projectile points are shown at lower left, figure 30. It is surprising that so few were found at this site in view of their abundance in some shell middens. The explanation probably is that this site began in the Archaic 3 period.

Long bone sections with double tapers and grooved in the center are shown in figure 32. Some of these bone impletions show a similarity of bone points from Kentucky¹ shell middens. It is possible these may be specialized projectile points which were grooved for attachment to a line and used on a harpoon. The groove may have served for secure attachment to a shaft thrown by an atlatl. The point ranges in length from 2.75" to 4.75". Some of the shorter ones may have served as a toggle on a fish line in place of a fish hook.

Bone fish hooks, bone spatulae splinters, deer ulnae spatulae, bone spatulae slotted, bone splinters bifurcated, and deer ulnae bifurcated, appear to be directly related to each other and to be involved in one stage or another of the manufacture of fish hooks. Spatulae made from bone splinters, split sections of bone, and deer ulnae quite probably represent the initial stage in the making of fish hooks. After the spatulae is worked into form a slot or eye is cut in it from the exterior side of the bone. Specimens with the slot cut through the bone and those showing

¹Webb, W. S. and Haag, W. G., 1939. Figure 13.

partial cutting of the slot were all placed in the slotted category. Cutting of the sides of the slot would produce two pieces; one a fish hook, the other a bifurcated splinter or ulna, as shown in figure 31. It is significant that rarely are the two prongs of the bifurcated bones of the same length. The cutting of the bone on the side of the slot which forms the shank of the fish hook is generally so near the end of the slot that only the stub of a prong remains. For this reason the majority of the so-called "bifurcated implements" actually have only one prong and the cut stump of a second.

The fact that bifurcated objects are more numerous than specimens in the other related categories gives credence to the theory that they are a by-product of the making of fish hooks. The bulk of the fish hooks from this site show either a curvature resulting from the curve in long bones or a thickness which would preclude their having been manufactured from deer phalanges.



Figure 28. Pipe, pestles, hammer stones, and abraders.

The occurrence of two longitudinally split deer phalanges, which are believed to be fish hook blanks, would indicate that all of the fish hooks from this site were not made from long bones by the method outlined above, see figure 31.



ANTLER ARTIFACTS
(Excluding Burial Associations)

[illegible]

Numerous antler tines, varying in length from whole tines to a short portion of the distal end, occurred. The tips of these tines were often quite blunt, suggesting their possible use as flaking tools, or possible punches. These tines would have served as excellent flakers. The proximal ends of these implements were either fractured or cut. Cut distal portions of tines may be, in some instances, at least, a by-product of the making of antler drifts or other implements. A number of the items placed in the antler tine category may be just unworked antler tine fragments.

Antler drifts, made from sections of antler, are ground or worn on the ends and may show evidence of considerable grinding or abrasion through use over their entire surface. Seventy-six of the drifts were complete enough to permit measurements of length. Lengths ranged from $1\frac{1}{4}$ to $4\frac{3}{8}$ inches with approximately nine-tenths of the drifts falling in the range of $1\frac{1}{2}$ to $3\frac{1}{2}$ inches. Two-thirds of the drifts were over $2\frac{1}{4}$ inches in length. See figure 36.

About two-thirds of the whole drifts had a round transverse cross-section while the cross-sections of the remaining third varied from elliptical to flattened-subrectangular forms. (Separate tabulations for round and elliptical drifts failed to show stratigraphic evidence for separate categories for these specimens.) A few of the cylindrical drifts were made from sections of antler near the distal end of the tine and as a result had the shape of truncated cones.

Socketed antler projectile points were made from the distal portion of antler tines. They are characterized by a conical socket for attachment to the projectile shaft. Generally the exterior surface is worked down to produce a sharp point and to remove the natural curve of the antler, making the projectile point asymmetrical.

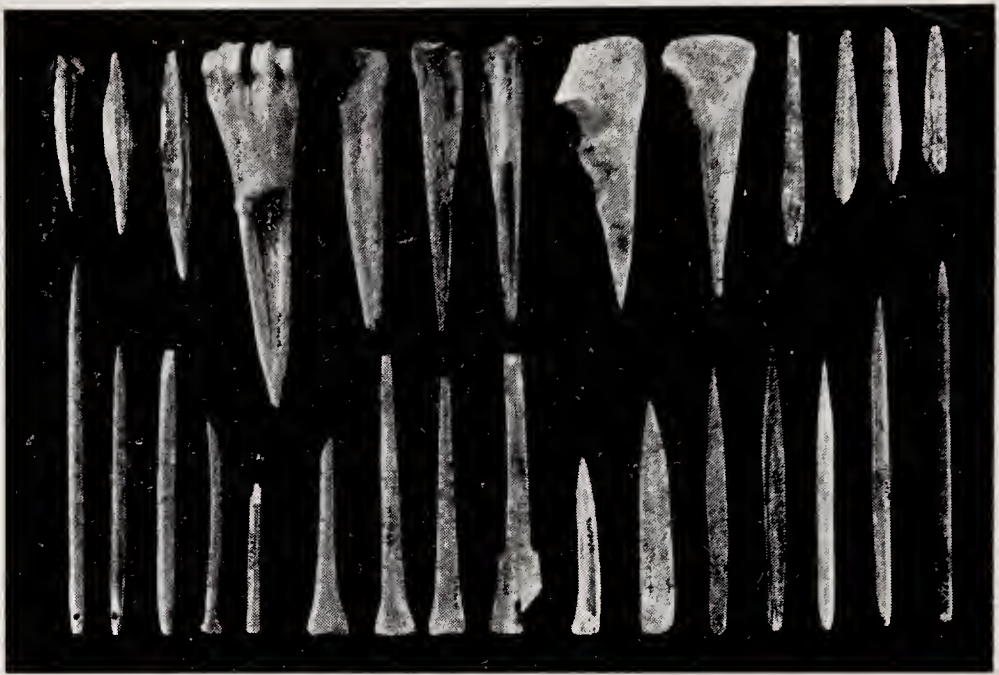


Figure 30. Bone awls, pins, needles, projectile points.

An antler headdress is shown in figure 33. The sections of antler projecting from the skull are split longitudinally and the rear half of the antler is cut away in part. This may have been for the purpose of attaching an extension, or perhaps to reduce the weight of the extended antlers and thus make it easier to wear on the head. There are three holes in the skull, and a hole in each antler near its base. These perforations surely were used as aids in attaching the headdress to the head of the wearer. The edges of these perforations show smoothing as if strings or thongs had been passed through them.

The finding of this antler headdress is regarded as very significant. It came from the lower portion of Zone D and thus should be assigned in time to the early portion of the Archaic 3 period. If, as seems highly probable, the people of the shell mounds developed into the so-called woodland manifestation, and it, in turn into Adena, which provided the cultural background for the highest expression of Ohio Hopewell, one can see in this antler headdress the beginning of a trait which found expression

in Adena* in copper antler headdresses made of flat copper and later in Ohio Hopewell** in copper antler headdresses, made "in the round," by heating copper into thin sheets and rolling them on artificial antler forms. Thus, another one of the diagnostic traits of Ohio Hopewell seems to have come to them by way of Adena from the Archaic peoples of the shell mounds, and in the shell middens to have been found at least as early as the Archaic 3 period.

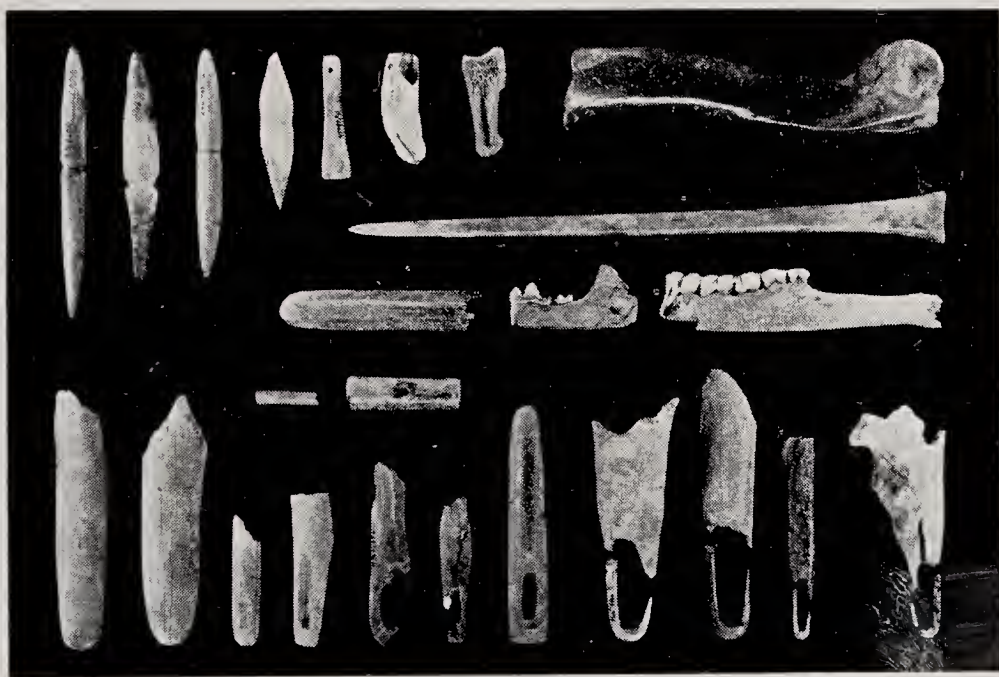


Figure 31. Bone artifacts. Lower row shows progressive stages in manufacture of bone fishhooks.

* Webb, Wm. S. and Haag, Wm. G., 1947, p. 76.

** Mills, Wm. C., 1922, p. 366.

** Moorehead, Warren K., 1892, p. 108.

Shell Artifacts

Most of the shell artifacts were found in burial association as shown by the following tabulation. Those found not in burial association were not significant.

Burial Number	Zone	Artifacts, (a)	Beads (b)
7.....	A.....	(a) 9 small cylindrical	
.....	.....	(b) 1 large cylindrical	
11.....	A.....	(a) 710 small disc	
.....	.....	(b) 4 large cylindrical	
93.....	C.....	(a) 585 small disc	
.....	.....	(b) 4 cylindrical	
107.....	C.....	(a) 52 small disc	
112.....	D.....	(a) 36 small disc	
.....	.....	(b) 6 cylindrical	
122.....	D.....	(a) 4 small disc	
156.....	D.....	(b) 1 cylinder	
157.....	D.....	(a) 7 disc	
161.....	A.....	(a) 2 small pearls	
185.....	.....	(a) 113 medium disc	
.....	.....	(a) 18 cylindrical and triangular pendants	
.....	.....	(a) 25 small disc	



Figure 32. Double tapered, grooved, bone section.

Burial Number	Zone	Artifacts,		Beads	
		(a)		(b)	
190.....	D.....	(a)	36 small disc		
201.....	D.....	(b)	2 cylinder		
205.....	C.....	(a)	86 small disc		
210.....	C.....	(a)	40 small disc		
211.....	C.....	(a)	4 small disc		

Pottery Artifacts (excluding burial associations) are listed as follows:

	A	B	Refuse	Total
Pottery discs, shell tempered	1			1
Pottery discs, limestone tempered	8	1	3	12
Pottery pipes, shell tempered	1			1
Pottery pipes, limestone tempered	2			2
Pottery trowel, shell tempered, fragment..	1			1
Pottery ear spool, shell tempered.....		1		1
Pottery bead, limestone tempered	1			1
Total				19

*Limestone-tempered pottery discs were all apparently made from pot fragments. The edges show grinding after firing and the discs are curved as are potsherds. They ranged in diameter from 1½ inches to 2½ inches. Approximately half (7 out of 12) of the discs had a central perforation.

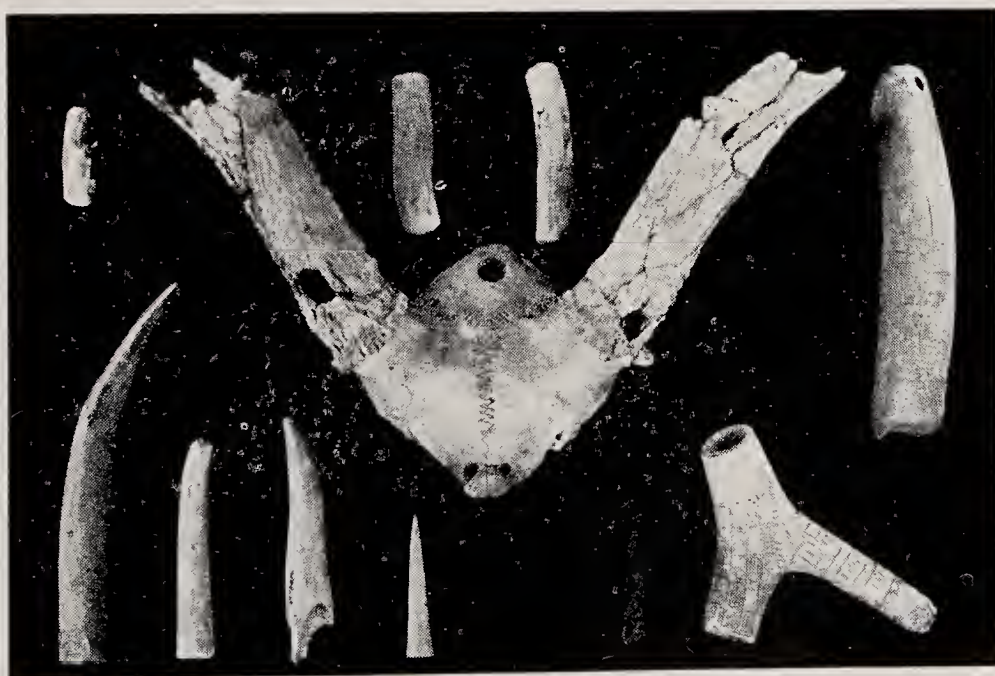


Figure 33. Antler artifacts, drifts, flakers, pendants, atlatl hooks, projectile points, carved antler section, and deer skull and antler "head-dress".

FLINT CLASSIFICATION

In order to count the hundreds of flint specimens and study their depth distribution, Mr. J. R. Foster, Junior Archaeologist, T. V. A., set up a flint classification system for Pickwick Basin. He recognized some 60 types, to each of which he assigned a number. By reference to the Pickwick Basin report, illustration of the various numbered types may be seen. Certain significant groups of associated flint knives and projectile points occur in the different time Zone in shell middens as discussed herein. These groups of types may be briefly described and indicated by number as follows:

Large, crude, more or less ovate blades

Types 3, 23, 25, 26, 52.

Slender, stemmed projectile points

Types 6, 8, 16, 22, 44.

Broad, short, stemmed projectile points

Types 7, 13, 18, 27, 58.

Concave base, stemmed projectile points

Types 30, 34, 38.

These types are illustrated by drawings (see figure 35).

In the depth distribution of flint at this site, the types are indicated by the number in the Pickwick classification and by a letter in the Guntersville system, also set up by Mr. Foster, but as yet unpublished.

DEPTH DISTRIBUTION OF FLINT TYPES

Flint Ma° 48

(Excluding Burial Associations)

Guntersville Basin Type	Pickwick Basin Type	ZONE								Total
		A	A&B	B	B&C	C	C&D	D	Refuse	
A	23	35		20	5	95	9	14	81	259
B	3	44	2	21	2	82	3	17	65	236
C	1	46	4	23		13		8	43	137
D	37	3	1	1		2			4	11
E	41	25	5	17		4		2	22	75
F	46	1						1	1	5
G	2	3							3	6
H	5	6	2	1		3		2	5	19
I	16	21		21		57	6	49	64	218
II		9	1	5		36	3	26	25	105
J	17	24	8	12		39	5	34	55	177
K	45	51	1	22		8		4	31	117
L	55	13		14	6	51	4	29	33	150
M	29	9		2	1	21	2	12	20	67
N	18	6		3		15	2	4	1	31
O	13	7		5		23	2		5	42
P	32	49	4	54		98	8	20	87	320
PP		1		2		9	3	1	9	25
Q	9	4		5	2	14	2		16	43
R	28	6	1	4		7			5	23
S	12	21	4	15	2	9		1	27	79
T	28	2		1		3			3	9
U	43					1				1
V	50					1				1
Spawls, (Nodules, flakes, etc.)		13	2	7	1	16	7	9	30	85
Scrapers (end and side)		3		3		3		2	11	22
Drills, winged		12		3	1	8	1	6	9	40
Broken, Unclassified		160	15	105	25	145	24	63	387	924
Unfinished, unclassified		11	1	13		15	4	9	31	84
Total		585	51	379	45	778	85	313	1,073	3,309



Figure 34. Some flint types represented at Site Ma^o48.

Flint Types 3, 23, 25, 26 and 52 were abundant and dominant in Archaic 2 period. Flint Types 30, 34 and 38 were introduced, reached their maximum and became obsolete within Archaic 2 period. Flint Types 6, 8, 16, 17, and 22 were dominant in Archaic 3 period but continued on to Pottery 2 period where they reached their maximum along with Flint Type 44.

Flint Types 7, 13, 18, 27 and 58 became important in Pottery 1 period and reached their maximum in Pottery 2 period.

*This classification follows that used for studying the flint types of the Pickwick Basin. See Webb and DeJarnette, 1942, pages 8-9.

POTTERY STUDY

by

Marion L. Dunlevy

A total of 141,119 pottery sherds, two whole vessels and several large sections were recovered from the Flint River Site. An analysis of the entire number was made. The first tabulation was recorded by individual blocks and trenches and the vertical separations by which these areas were excavated. Comparison indicated that there was little variation from block to block in type, quantity and the depth to which pottery occurred, except for a slight tilt toward the river in Blocks 1, 2 and 3. To avoid repetition of similar data the tabulations of Blocks 4 and 5, which best represent the normal condition at the site, and a summary for the site as a whole will be included here.

Of the pottery which was separated into zones, approximately 83 per cent occurred in Zone A, 12 per cent in Zone B, 1 per cent in Zone C and .10 per cent in Zone D, the remaining per cent being accounted for by the material with several zones mixed. The sherds occurring below Zone A may be accounted for by the many pits throughout the site and working down through natural agencies.

The material from a few of the pits was separated from that of the general excavation. In the tabulation this material was combined with the refuse and river cut and headed "No Vertical Separation." Tilting of zones, several occurring within a 6-inch or 1-foot level, and pits account for that material designated by more than one zone.

Very few fiber-tempered sherds occurred at the site and these were widely scattered vertically and horizontally. Few sand-tempered sherds occurred in Block 4, for which a detailed tabulation is included. In Block 5, the Site Summary and a number of other area tabulations, it may be noted that the proportion of sand-tempered sherds gradually decreases in the upper levels. The absence of sand-tempered sherds in Zone D and several of the mixed zones does not invalidate the conclusion because the quantity of sherds is so small. The statistical

expectation of occurrence is one sand-tempered in approximately 370 sherds.

The pottery horizon is, for the most part, a limestone-tempered one and diversity of decorative types are well represented. Plain and brushed surfaces, stamped, fabric marked and cord marked sherds were found scattered through nearly all of the levels.

In the tabulations neither precedence of some types over others nor markedly varying percentages of a type in different levels are observable. This fact bears considerable significance in that here is a site with an abundance of the limestone-tempered types occurring in a midden of considerable depth, regions of which were excavated with numerous vertical separations. The evidence at hand suggests that when the limestone-tempered ware was first introduced at the site a variety of surface treatments was practiced. There appears to have been little change by increasing or decreasing popularity of types or by the introduction of new types within the limestone-tempered ware.

Sherds were frequently smoothed subsequent to the application of the decoration. A number of cross-overs of surface treatment are noteworthy, however. Brushing over check stamping is common, frequently nearly to the point of obliteration of the stamping. Pinching over check stamping occurs occasionally, as does incising over brushing and over parallel line stamping.

Figure 34C (Field Specimen No. 3896) illustrated a form common in Type 3a-Mulberry Creek Plain. Although no other restorations were possible the most commonly represented forms in this type, however, appear to have been large wide mouthed, slightly flaring rimmed, conical based vessels. Figure 34a is a flaring rimmed, round bodied vessel of Type 3b-Long Branch Fabric Marked. This form is frequently represented by the sherds of the type, the most common form being the wide mouthed, flaring rimmed jar.

A relatively small quantity of shell-tempered sherds occurred at the site. In Zone A 1.52 per cent of the sherds were shell tempered, in Zone B .45 per cent, and in Zones C and D only one sherd each.

The shell-tempered pottery was superficial, confined to the upper position of Zone A. One burial was accompanied by a shell-tempered pottery vessel (figure 34B).

An analysis of the great quantity of pottery from the Flint River Site indicates the preponderance of limestone-tempered pottery with a diversity of surface modifications. Statistical evidence indicates that a larger proportion of sand-tempered pottery occurred in the lower levels than in the upper levels. The occurrence of shell-tempered pottery in the upper levels of Zone A suggests its superficiality and the super-position of shell-tempered pottery. The limestone-tempered ware represents a high development of the limestone-tempered ware found in the Gunterville Basin. The diversity of sand-tempered types found at the Flint River Site is more common to the Wheeler and Pickwick Basins than to the Gunterville Basin where they occur infrequently.

BLOCK NO. 4

Level	Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
0'-0.5'	A	2a O'Neil Plain	1	.05	1	.05
		3a Mulberry Creek Plain	171	8.81		
		3c & d Wright Check Stamped	95	4.82		
		3e Bluff Creek Simple Stamped	1	.05		
		3g Sauty Incised	1	.05		
		3h Flint River Cord Marked	10	.51		
		3n Flint River Brushed	1,657	85.40	1,935	99.64
		4a McKelvey Plain	2	.10	2	.10
		5a Plain Shell	13	.16		
		5e McKee Island Punctuated	1	.05	14	.21
		Total	1,952	100.00	1,952	100.00
.5'-1.0'	A	2a O'Neal Plain	1	.02	1	.02
		3a Mulberry Creek Plain	410	9.50		
		3c & d Wright Check Stamped	470	11.10		
		3h Flint River Cord Marked	26	.62		
		3n Flint River Brushed	3,284	78.72	4,190	99.94
		5a Plain Shell	2	.04	2	.04
		Total	4,193	100.00	4,193	100.00
1.0'-1.5'	A	3a Mulberry Creek Plain	847	30.85		
		3b Long Branch Fabric Marked	6	.21		
		3c & d Wright Check Stamped	734	26.75		
		3e Bluff Creek Simple Stamped	1	.04		
		3f Pickwick Complicated Stamped	2	.07		
		3h Flint River Cord Marked	2	.07		
		3n Flint River Brushed	1,145	41.69	2,737	99.68
		5a Plain Shell	9	.32	9	.32
		Total	2,746	100.00	2,746	100.00
1.5'-2.0'	A	2a O'Neal Plain	1	.05	1	.05
		3a Mulberry Creek Plain	1,470	84.00		
		3b Long Branch Fabric Marked	4	.22		
		3c & d Wright Check Stamped	85	4.88		
		3e Bluff Creek Simple Stamped	3	.17		
		3f Complicated Stamped	7	.40		
		3h Flint River Cord Marked	5	.28		
		3n Flint River Brushed	176	10.00	1,750	99.95
		Total	1,751	100.00	1,751	100.00
2.0'-2.5'	A	2a O'Neal Plain	1	.13	1	.13
		3a Mulberry Creek Plain	360	48.52		
		3b Long Branch Fabric Marked	1	.13		
		3c & d Wright Check Stamped	8	1.07		
		3h Flint River Cord Marked	3	.45		
		3n Flint River Brushed	369	49.70	741	99.87
		Total	742	100.00	742	100.00
2.0'-2.5'	A&B	2a O'Neal Plain	1	.13	1	.13
		3a Mulberry Creek Plain	428	55.62		
		3b Long Branch Fabric Marked	8	1.05		
		3c & d Wright Check Stamped	19	2.49		
		3e Bluff Creek Simple Stamped	7	.91		
		3f Pickwick Complicated Stamped	3	.39		
		3g Sauty Incised	1	.13		
		3h Flint River Cord Marked	17	2.25		
		3n Flint River Brushed	282	36.90	765	99.74
		5a Plain Shell	1	.13	1	.13
		Total	767	100.00	767	100.00

THE FLINT RIVER SITE

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BLOCK NO. 4 (Continued)

Level	Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
2.5'-3.0'	A	3a Mulberry Creek Plain	34	41.45		
		3e Bluff Creek Simple Stamped	1	1.20		
		3n Flint River Brushed	47	57.35		
		Total	82	100.00	82	100.00
2.5'-3.0'	B	2a O'Neal Plain	1	.22	1	.22
		3a Mulberry Creek Plain	360	77.93		
		3b Long Branch Fabric Marked	8	1.75		
		3c & d Wright Check Stamped	31	6.70		
		3e Bluff Creek Simple Stamped	18	3.90		
		3f Pickwick Complicated Stamped	31	6.70		
		3n Flint River Brushed	13	2.80	461	99.78
		Total	462	100.00	462	100.00
2.5'-3.0'	A&B	3a Mulberry Creek Plain	77	16.27		
		3b Long Branch Fabric Marked	1	.21		
		3c & d Wright Check Stamped	4	.84		
		3e Bluff Creek Simple Stamped	2	.42		
		3f Pickwick Complicated Stamped	4	.84		
		3h Flint River Cord Marked	2	.42		
		3n Flint River Brushed	384	81.00	474	100.00
		Total	474	100.00	474	100.00
3.0'-3.5'	A	3a Mulberry Creek Plain	129	95.58		
		3b Long Branch Fabric Marked	1	.74		
		3f Pickwick Complicated Stamped	2	1.48		
		3n Flint River Brushed	3	2.20	135	100.00
		Total	135	100.00	135	100.00
3.0'-3.5'	A&B	3a Mulberry Creek Plain	157	47.41		
		3b Long Branch Fabric Marked	5	1.51		
		3c & d Wright Check Stamped	7	2.10		
		3e Bluff Creek Simple Stamped	17	5.15		
		3f Pickwick Complicated Stamped	5	1.51		
		3h Flint River Cord Marked	6	1.82		
		3n Flint River Brushed	134	40.50	331	100.00
		Total	331	100.00	331	100.00
3.0'-3.5'	A&C	3a Mulberry Creek Plain	16	67.00		
		3b Long Branch Fabric Marked	1	4.00		
		3c & d Wright Check Stamped	3	12.50		
		3n Flint River Brushed	4	16.50	24	100.00
		Total	24	100.00	24	100.00
3.0'-3.5'	B	2a O'Neal Plain	2	.30	2	.30
		3a Mulberry Creek Plain	422	64.00		
		3b Long Branch Fabric Marked	19	2.86		
		3c & d Wright Check Stamped	17	2.59		
		3e Bluff Creek Simple Stamped	19	2.86		
		3f Pickwick Complicated Stamped	12	1.82		
		3h Flint River Cord Marked	21	3.19		
		3n Flint River Brushed	134	20.10		
		Unclassified	15	2.28	659	99.70
		Total	661	100.00	661	100.00
3.5'-4.0'	A&B	3a Mulberry Creek Plain	13	13.55		
		3c & d Wright Check Stamped	4	4.13		
		3e Bluff Creek Simple Stamped	1	1.04		
		3h Flint River Cord Marked	2	2.08		
		3n Flint River Brushed	76	79.20	96	100.00
		Total	96	100.00	96	100.00

BLOCK NO. 4 (Continued)

Level	Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
3.5'-4.0'	B	3a Mulberry Creek Plain	235	79.00		
		3b Long Branch Fabric Marked	8	2.66		
		3c & d Wright Check Stamped	17	5.70		
		3e Bluff Creek Simple Stamped	8	2.66		
		3f Pickwick Complicated Stamped	4	1.39		
		3h Flint River Cord Marked	1	.34		
		3n Flint River Brushed	25	8.25	298	100.00
		Total	298	100.00	298	100.00
3.5'-4.0'	B&C	3a Mulberry Creek Plain	11	52.70		
		3b Long Branch Fabric Marked	3	14.35		
		3e Bluff Creek Simple Stamped	2	9.60		
		3f Pickwick Complicated Stamped	1	4.50		
		3h Flint River Cord Marked	1	4.50		
		3n Flint River Brushed	3	14.35	21	100.00
		Total	21	100.00	21	100.00
4.0'-4.5'	A&B	3a Mulberry Creek Plain	17	48.55		
		3c & d Wright Check Stamped	3	8.55		
		3e Bluff Creek Simple Stamped	5	14.35		
		3n Flint River Brushed	10	28.55	35	100.00
		Total	35	100.00	35	100.00
4.0'-4.5'	B	2b Alexander Incised	2	.88		
		2g Columbus Punctated	1	.44	3	1.32
		3a Mulberry Creek Plain	36	15.80		
		3b Long Branch Fabric Marked	5	2.20		
		3c & d Wright Check Stamped	12	5.30		
		3e Bluff Creek Simple Stamped	4	1.75		
		3f Pickwick Complicated Stamped	2	.88		
		3h Flint River Cord Marked	1	.44		
		3n Flint River Brushed	164	72.31	224	98.68
		Total	227	100.00	227	100.00
4.0'-4.5'	B&C	3a Mulberry Creek Plain	6	60.00		
		3n Flint River Brushed	4	40.00	10	100.00
		Total	10	100.00	10	100.00
4.0'-4.5'	D	3a Mulberry Creek Plain	6	40.00		
		3f Pickwick Complicated Stamped	2	13.50		
		3n Flint River Brushed	7	46.50	15	100.00
		Total	15	100.00	15	100.00
4.5'-5.0'	A&B	2b Alexander Incised	1	3.59	1	3.59
		3a Mulberry Creek Plain	5	17.70		
		3b Long Branch Fabric Marked	3	10.69		
		3c & d Wright Check Stamped	2	7.25		
		3e Bluff Creek Simple Stamped	1	3.59		
		3f Pickwick Complicated Stamped	1	3.59		
		3n Flint River Brushed	14	50.00	26	92.82
		4a McKelvey Plain	1	3.59	1	3.59
		Total	28	100.00	28	100.00
4.5'-5.0'	A&B&C	3a Mulberry Creek Plain	14	50.00		
		3c & d Wright Check Stamped	1	3.50		
		3f Pickwick Complicated Stamped	1	3.50		
		3n Flint River Brushed	12	43.00	28	100.00
		Total	28	100.00	28	100.00

THE FLINT RIVER SITE

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BLOCK NO. 4 (Continued)

Level	Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
4.5'-5.0'	C&B	2a O'Neal Plain	7	7.90	7	7.90
		3a Mulberry Creek Plain	42	47.75		
		3e Bluff Creek Simple Stamped	3	3.41		
		3h Flint River Cord Marked	1	1.14		
		3n Flint River Brushed	35	39.80	81	92.10
		Total	88	100.00	88	100.00
4.5'-5.0'	C&D	3a Mulberry Creek Plain	23	52.25		
		3b Long Branch Fabric Marked	2	4.50		
		3c & d Wright Check Stamped	1	2.25		
		3n Flint River Brushed	18	41.00	44	100.00
		Total	44	100.00	44	100.00
5.5'-6.0'	A&B	3a Mulberry Creek Plain	6	60.00		
		3n Flint River Brushed	4	40.00	10	100.00
		Total	10	100.00	10	100.00
5.5'-6.0'	AB&C	3a Mulberry Creek Plain	16	80.00		
		3b Long Branch Fabric Marked	2	10.00		
		3f Pickwick Complicated Stamped	1	5.00		
		3n Flint River Brushed	1	5.00	20	100.00
		Total	20	100.00	20	100.00
5.5'-6.0'	B&C	3a Mulberry Creek Plain	10	30.00		
		3n Flint River Brushed	23	70.00	33	100.00
		Total	33	100.00	33	100.00
6.0'-6.5'	B&C	3a Mulberry Creek Plain	6	9.50		
		3n Flint River Brushed	58	90.50	64	100.00
		Total	64	100.00	64	100.00
TOTAL FOR BLOCK NO. 4			15,337		15,337	

BLOCK NO. 5

A	2a O'Neal Plain	1	.01		
	2b Alexander Incised	1	.01	2	.02
	3a Mulberry Creek Plain	3,157	30.20		
	3b Long Branch Fabric Marked	12	.12		
	3c & d Wright Check Stamped	851	8.18		
	3e Bluff Creek Simple Stamped	8	.08		
	3f Pickwick Complicated Stamped	21	.21		
	3g Sauty Incised	5	.05		
	3h Flint River Cord Marked	173	1.65		
	3i Cox Punctated	1	.01		
	3k Flint River Incised	2	.02		
	3n Flint River Brushed	6,058	58.00	10,288	98.52
	5a Plain Shell	137	1.31		
	5c Langston Fabric Marked	15	.14		
	5d Moundville Incised	1	.01	153	1.46
	Total	10,441	100.00	10,441	100.00

BLOCK NO. 5 (Continued)

Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
B	2a O'Neal Plain	6	.71		
	2b Alexander Incised	3	.35		
	2f Alexander Pinched	2	.24	11	1.30
	3a Mulberry Creek Plain	476	56.00		
	3b Long Branch Fabric Marked	51	6.00		
	3c & d Wright Check Stamped	129	15.26		
	3e Bluff Creek Simple Stamped	9	1.05		
	3f Pickwick Complicated Stamped	13	1.54		
	3h Flint River Cord Marked	2	.24		
	3n Flint River Brushed	158	18.50	838	98.69
	5q Moundville Mat Marked	1	.11	1	.11
	Total	850	100.00	850	100.00
	TOTAL FOR BLOCK NO. 5	11,291		11,291	

SITE SUMMARY

	1a Wheeler Plain	2	.01	2	.01
A	2a O'Neal Plain	43	.06		
	2b Alexander Incised	3	.01		
	2c Simthsonia Zone Stamped	2	.01		
	2f Alexander Pinched	1	.01		
	2g Columbus Punctated	1	.01		
	2q Benson Simple Stamped	5	.01	55	.11
	3a Mulberry Creek Plain	36,437	47.30		
	3b Long Branch Fabric Marked	640	.83		
	3c & d Wright Check Stamped	8,912	11.50		
	3c & d & m Wright Check Stamped and Flint River Pinched	7	.01		
	3e Bluff Creek Simple Stamped	137	.18		
	3f Pickwick Complicated Stamped	107	.14		
	3g Sauty Incised	24	.03		
	3h Flint River Cord Marked	360	.47		
	3i Cox Punctated	6	.01		
	3k Flint River Incised	15	.02		
	3m Flint River Pinched	6	.01		
	3n Flint River Brushed	29,216	37.80		
	Unclassified Limestone-Tempered	14	.02	75,881	98.32
	4a McKelvey Plain	9	.02		
	4b Mulberry Creek Cord Marked	4	.01		
	4f Gunter's Cord Impressed	1	.01	14	.04
	5a Plain Shell	1,082	1.40		
	5c Langston Fabric Marked	58	.07		
	5d Moundville Incised	5	.01		
	5e McKee Island Punctated	1	.01		
	5g McKee Island Brushed	2	.01		
	Unclassified Shell Tempered	10	.02	1,158	1.52
	Total	77,110	100.00	77,110	100.00

SITE SUMMARY (Continued)

Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
A&B	2a O'Neal Plain	5	.14		
	2b Alexander Incised	1	.03	6	.17
	3a Mulberry Creek Plain	2,088	58.65		
	3b Long Branch Fabric Marked	33	.93		
	3c & d Wright Check Stamped	62	1.74		
	3e Bluff Creek Simple Stamped	80	2.25		
	3f Pickwick Complicated Stamped	25	.70		
	3g Sauty Incised	1	.03		
	3h Flint River Cord Marked	297	8.35		
	3i Cox Punctated	3	.09		
	3k Flint River Incised	6	.17		
	3m Flint River Brushed	950	26.60		
	Unclassified Limestone Tempered	3	.17	3,551	99.77
	4a McKelvey Plain	1	.03	1	.03
	5a Plain Shell	1	.03	1	.03
	Total	3,559	100.00	3,559	100.00
AB&C	3a Mulberry Creek Plain	48	100.00	48	100.00
A to C	3a Mulberry Creek Plain	24	100.00	24	100.00
B	1a Wheeler Plain	1	.01	1	100.00
	2a O'Neal Plain	49	.45		
	2b Alexander Incised	19	.18		
	2c Smithsonia Zone Stamped	3	.03		
	2f Alexander Pinched	9	.08		
	2g Columbus Punctated	3	.03		
	2i Sauty Cord Impressed	2	.02		
	2l Benson Fabric Marked	1	.01		
	2q Benson Simple Stamped	1	.01	87	.81
	3a Mulberry Creek Plain	7,776	71.50		
	3b Long Branch Fabric Marked	759	6.90		
	3c & d Wright Check Stamped	591	5.45		
	3e Bluff Creek Simple Stamped	269	2.47		
	3f Pickwick Complicated Stamped	163	1.50		
	3h Flint River Cord Marked	145	1.34		
	3k Flint River Incised	1	.01		
	3n Flint River Brushed	979	9.30		
	Unclassified Limestone Tempered	26	.23	10,709	98.70
	4a McKelvey Plain	2	.02		
	4i Cox Fabric Marked	1	.01	3	.03
	5a Plain Shell	43	.40		
	5c Langston Fabric Marked	1	.01		
	5p Moundville Mat Marked	1	.01		
	Unclassified Shell Tempered	3	.03	48	.45
	Total	10,848	100.00	10,848	100.00
B&C	2a O'Neal Plain	33	9.80		
	2b Alexander Incised	1	.29		
	2f Alexander Pinched	6	1.78	40	11.87
	3a Mulberry Creek Plain	207	61.43		
	3b Long Branch Fabric Marked	44	13.06		
	3e Bluff Creek Simple Stamped	3	.89		
	3c & d Wright Check Stamped	1	.29		
	3h Flint River Cord Marked	7	2.08		
	3n Flint River Brushed	35	10.38	297	88.13
	Total	337	100.00	337	100.00

SITE SUMMARY (Continued)

Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
C	1a Wheeler Plain	1	.09	1	.09
	2a O'Neal Plain	26	2.51		
	2b Alexander Incised	3	.29		
	2f Alexander Pinched	2	.19		
	2g Columbus Punctated	1	.09		
	2l Benson Fabric Marked	1	.09	33	3.17
	3a Mulberry Creek Plain	754	73.04		
	3b Long Branch Fabric Marked	90	8.75		
	3c & d Wright Check Stamped	66	6.40		
	3e Bluff Creek Simple Stamped	14	1.33		
	3f Pickwick Complicated Stamped	6	.58		
	3h Flint River Cord Marked	1	.09		
	3n Flint River Brushed	64	6.25		
	Unclassified Limestone Tempered	1	.09	996	95.56
	4a McKelvey Plain	1	.09	1	.09
	5a Plain Shell	1	.09	1	.09
	Total	1,032	100.00	1,032	100.00
C&D	3a Mulberry Creek Plain	23	52.20		
	3e Bluff Creek Simple Stamped	2	4.55		
	3c & d Wright Check Stamped	1	2.23		
	3n Flint River Brushed	18	41.00	44	100.00
	Total	44	100.00	44	100.00
D	3a Mulberry Creek Plain	45	47.38		
	3e Bluff Creek Simple Stamped	2	2.10		
	3f Pickwick Complicated Stamped	2	2.10		
	3n Flint River Brushed	45	47.38	94	98.96
	5a Plain Shell	1	1.04	1	1.04
	Total	95	100.00	95	100.00
No Vertical Separation	1a Wheeler Plain	1	.01		
	1e Pickwick Simple Stamped	1	.01	2	.02
	2a O'Neal Plain	181	.37		
	2b Alexander Incised	48	.10		
	2c Smithsonia Zone Stamped	2	.01		
	2f Alexander Pinched	12	.03		
	2g Columbus Punctated	10	.02		
	2i Sauty Cord Impressed	1	.01		
	2j Kirby Complicated Stamped	5	.01		
	2l Benson Fabric Marked	4	.01		
	2o Sauty Check Stamped	1	.01		
	2p Law's Red Filmed	1	.01		
	2q Ecnson Simple Stamped	1	.01	266	.59
	3a Mulberry Creek Plain	24,715	51.54		
	3b Long Branch Fabric Marked	901	1.87		
	3c & d Wright Check Stamped	3,452	7.20		
	3e B'uff Creek Simple Stamped	227	.47		
	3f Pickwick Complicated Stamped	90	.19		
	3g Sauty Incised	15	.03		
	3h Flint River Cord Marked	228	.48		
	3i Cox Punctated	5	.01		
	3k Flint River Incised	11	.02		
	3n Flint River Brushed	15,995	33.15		
	Unclassified Limestone Tempered	11	.02	45,650	94.98

SITE SUMMARY (Continued)

Zone	Type	Number of Sherds	Per- centage by Type	Total by Temper	Per- centage by Temper
4a	McKelvey Plain	65	.14		
4b	Mulberry Creek Cord Marked	2	.01		
4d & e	Wheeler Check Stamped	3	.01	70	.16
5a	Plain Shell	2,006	4.17		
5b	McKee Island Cord Marked	3	.01		
5c	Langston Fabric Marked	22	.04		
5d	Moundville Incised	1	.01		
5g	McKee Island Brushed	1	.01		
5h	Moundville Red Filmed	1	.01	2,034	4.41
Total		48,022	100.00	48,022	100.00
TOTAL FOR SITE		141,119		141,119	

Ma^o 48
POTTERY VESSELS

Type	Vessel Form	Yield Specimen Number	Location	Maximum Diameter	Height	Orifice	Appendages	Photo Number	Figure Number
5a Plain Shell	Jar	a734	Bur. No 10	8"	6.25"	5.5"	Paired Strap Handles	140 Ma ^o 48	35b
3b Long Branch Fabric Marked	Jar	a998	110R70 Pit Zones B to C 2.8' Level						
3bg Sauty Incised Neck and Long Branch Fabric Marked Body	Fragment of Jar	a2701	Zone B Trench 25 to 50 L 5 and 40	5.25"	4.75"	4.0"	None	140 Ma ^o 48	35a
3a Mulberry Creek Plain	Fragment of Jar	a3396	90R60 Zone D Block No. 4	Large Section Only			None	162 Ma ^o 48	35c
2j Kirby Compi-cated Stamped	Fragment of Bowl	a3894	Misc. Trench Zone B	Fragment Only			None	142 Ma ^o 48	



Figure 35. (From left to right)
(a) Limestone tempered pottery jar, 3b, Long Branch Fabric-
Marked, surface subsequently smoothed.
(b) Pottery jar, 5a, Plain, shell tempered.
(c) Section of limestone tempered pottery jar, 3a, Mulberry
Creek Plain.

CONCLUSIONS

As pointed out in the body of the manuscript this site having four natural zones, A, B, C, D, shows only two important periods of occupancy, i.e., Archaic (3) and Pottery (2) periods.

Since the sandstone and steatite vessel fragments extend down into Zone D to the bottom of the midden, it is clear that occupancy at this site began in Archaic (3) times, and lasted long enough for the dwellers to lay down on top of Zone D, a midden some three feet thick, Zone C. In these Zones they buried their dead, some in "sitting posture", and in some of these cases, placed vessels of sandstone or steatite in the graves, showing a preference for the graves of young children.

Since the introduction and use of steatite and sandstone vessels has been taken as a chronological marker indicating the beginning of the Archaic (3) period in the history of the shell midden people it is interesting to note their manner of its use and the customs associated with it. The use of stone vessels is clearly to be ascribed to prepottery times. Even when later these people possessed grit tempered pottery in quantity there was no evidence of a desire to place pottery with the dead. That trait seems not to have developed until Pottery (3) period, commonly referred to as Middle Mississippi, and to have been practiced largely by the makers of shell tempered pottery. Because of the long development demonstrated for the shell mound people and the obvious general continuity of their cultural manifestations, it is hardly to be supposed that the placing of these heavy stone vessels with the dead was an attempt to use them as "burial offerings" or "grave furniture", as such objects might be called, in the sense in which such terms are used in connection with later times as the Pottery (3) period. Rather the explanation of the occurrence of stone vessels in graves may be found in a study of several seemingly related customs. It was in Archaic (3) period that burials in "sitting posture" became frequent and reached a maximum, but it was by no means an exclusive mode of burial. "Sitting burials" placed in pits were often covered by large flat stones or by river pebbles. Such stones were generally not used to cover

partially flexed or round grave burials made at the same time. This desire to place over a "sitting burial" a covering of stone may have been the reason for placing stone vessels in these graves.

Some of these vessels were fragmentary when placed in the grave, i.e., they had been previously broken and not all of the fragments of a vessel were deposited in the grave. They might thus have been used merely because they were fairly large pieces of stone and not because they were, or ever had been utility vessels. Further, such vessels were invariably placed in an inverted position, which would seem to preclude any possibility that they held any content such as food or drink for the dead, when they were put in the grave. These graves seem to demonstrate that these vessel fragments, often found inverted over the head of the skeletons were used as stone covering for "sitting burials", rather than as burial offerings.

The occupancy in the Archaic (3) period seems to have been interrupted by the flood which laid down the sand-silt deposit nearly two feet in thickness, constituting the sand-silt matrix of Zone B. This effectively sealed off the site for some period of time, how long it is impossible to determine.

However, when occupancy was later resumed the people who came back had grit tempered pottery in many varieties of form and surface finish. This indicates a people who had attained a large portion of the development of the Pottery (2) period. The some half dozen fiber tempered sherds found in Zone A are hardly sufficient to justify any assumption of any extensive occupancy in the Pottery (1) period. The ratio of six fiber tempered sherds to a total of more than 140,000 sherds is taken to mean that while fiber tempered vessels were being used in that portion of the Tennessee River Valley, this site was probably unoccupied and that the shell mound dwellers along the Tennessee had developed far into the Pottery (2) period before they returned to again dwell on this site at the mouth of Flint River.

How long they lived in the Pottery (3) period and why the site was finally abandoned is unknown. The wealth of artifacts, and the number of burials revealed by the midden in this period,

suggest a populous and prosperous community. The people of the Pottery (2) period and the Archaic (3) period differ in no essential respect in their physical anthropological characteristics. Many of the artifacts and customs of the earlier period persisted into the latter.

After the site was finally abandoned by the makers of grit tempered pottery, other residents of the valley came to this site to bury their dead in Pottery (3) times. These people placed the dead fully extended in a shallow pit, and frequently placed with the dead many vessels of shell tempered pottery. A few such burials were found at this site. While evidence thus exists that there was occupancy in the region, in Pottery (3) times, there are very few of the artifacts of these people to be found in the midden. This seems to show that they lived elsewhere and came to the site only as transient visitors, occasionally to bury their dead. Certainly they added very little if anything to the height of the midden.

Thus, the archaeological record of this site fits into the general picture of the long development of the Archaic people of the shell mounds on the Tennessee River by presenting evidence of occupancy during the Archaic (3), Pottery (2) and Pottery (3) periods, and equally valid evidence in explanation of the absence of occupancy in the other periods.

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